QL Today

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The Magazine about QL, QDOS, Sinclair Computers, SMSQ...

QL is 25

www.QLToday.com

Contents

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in alphabetical order

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If you need more information about the UNZIP program which is used by our BOOT program to unpack the files, we suggest that you visit Dilwyn Jones' web site where you find more information about lots of interesting QDOS software and INFOZIP at **http://www.dilwyn.uk6.net/arch/index.html**

Editorial

by Geoff Wicks

In my family you will often hear people of my generation and above say something like. "If I drop dead tomorrow it will not be a disaster".

Outsiders become concerned when they hear this, thinking we are about to do ourselves in. But it is not a depressive statement, more one of contentment. We are recognising that our time left on earth is limited, that we have made good use of our lives, done lots of interesting things and taken on many challenges. We have justified our existence.

I cannot help but think of the QL in similar terms. The last 12 months have been difficult with several well known QL-ers reducing their activities and severe problems in QL organisations. Both the Quanta Magazine and QL Today have had serious difficulties. Realistically we have to be prepared for the worst and accept the time will come when the QL will be no more. However when the last QL-er switches off his machine for the very last time we can be proud about what we have achieved over many years.

Duncan Neithercut reminds us in the latest Quanta Magazine that our numbers may have declined dramatically over the last ten years, but in those ten years there have been many software and hardware innovations. And anyone who doubts if there is still life in the QL community need look no further than the content of this magazine. Our last issue struck a chord with many readers and we have had an unprecedented number of reactions to many of the articles in that issue. A response like this makes our work at QL Today worthwhile.

It is not only the QL that is 25 years old, but also Quanta. This year is an important year for the organisation with the present officers coming to the end of their three year term of office. They never took up QL Today's offer to present their case in the magazine, and the offer remains open to Quanta's new officers but with an extra challenge.

I am not interested in receiving a boring piece about subgroups, the library and the magazine - that's stuff we already know. I want to know if Quanta has a vision for the future. Where does it see itself within the QL community? In our news section we summarise Duncan Neithercut's proposals for a radical reshaping of Quanta. Is this the way that Quanta wants to go? Have they alternative, but equally radical proposals? Or do they prefer the certainty of the present way of working?

It is not just Quanta that should be asking questions like these, but the whole QL community. We have had a bruising 12 months behind us and there is no guarantee that the troubles are yet over. Do we see our future in a radical reshaping of our community or do we prefer the safety of going on as before?

Whatever problems lie in store for us and however well or badly we cope with them, of one thing we can be sure. During our existence we have achieved far more than anyone would have thought possible 25 years ago.

QUARTER CENTENARY QL

At first it appeared that there was no great interest in celebrating the QL's quarter centenary. Almost 18 months ago Quanta was the first off the starting block with a suggestion for a "party" to celebrate 25 QL (and Quanta) years, although the "party" has now become a workshop and celebratory dinner to coincide with the 2009 AGM. However until recently members showed little interest in this event. There was a similar lack of enthusiasm on the continent. Not one person reacted to a QL Today query about a possible continental celebration.

At the beginning of the year QL-ers appeared to have little interest in celebrating 25 QL years, but suddenly an unexpected announcement from Spain sparked off a wave of enthusiasm.

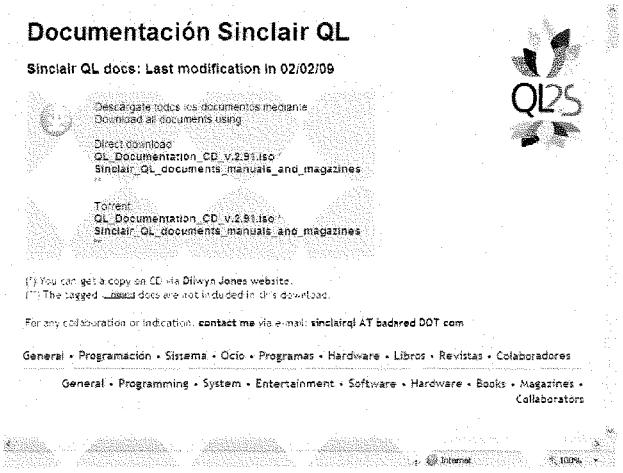
Javier Guerra announced that Sinclair QL Spanish Resources had been working for some months on a project to celebrate the quarter centenary. More than 100 manuals, books and magazines, many in English, had been scanned and placed on the internet for downloading. These documents include "The definitive handbook of QL SuperBASIC" by Jan Jones and the "QL Technical Guide" by Tony Tebby.

The documents can be downloaded from:

http://www.speccy.org/sinclairql/archivo/docs/docs.htm

Those QL-ers enthusiastic enough to want to download the material in one go could make use of a torrent:

http://thepiratebay.org/torrent/4636229/ Sinclair_QL_documents_manuals_ and_magazines



Some users who have attempted to use the torrent have had difficulties in understanding the technical side, finding the necessary software and from lengthy download times.

The documents on the site are divided into 8 sections. General, Programming, System, Entertainment Manuals, Software Manuals, Hardware, Books and Magazines. The General section is a late addition to the site and is a downloadable version of Dilwyn Jones' QL documentation CD.

A word of warning is appropriate. The copyright status of some items is a little uncertain and readers should check the copyright laws in their own land before downloading some documents.

Javier has designed a striking "QL is 25" logo for his site and this has been adopted, with permission, by Quanta for its own celebrations.

Shortly after Javier's launch of the Spanish initiative Urs König announced a quarter centenary website:

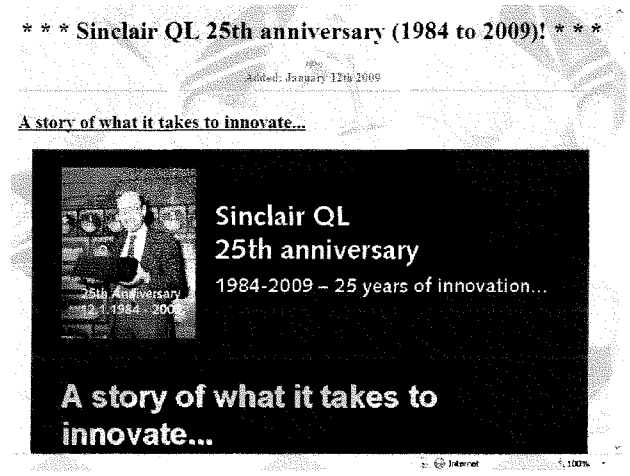
http://www.qlvsjaguar.homepage.bluewin.ch/ SinclairQL_25th_anniversary_1984_to_2009.html

"On January 12th 1984 Sir Clive Sinclair presented the Sinclair QL Professional Computer in a Hollywood-style launch event at the Intercontinental Hotel, Hyde Park Corner, London. This was exactly 12 days earlier than Steve Jobs presented the Apple Macintosh.

The QL still is a very good example of an innovative, stylish, powerful and underestimated product. On one hand it failed in the market in the long run but on the other it influenced many developments which ended in today's products. At least in seven aspects the QL was a real Quantum Leap:

1. First 32bit micro for both home and office use (Motorola MC68K CPU).
2. First PC with pre-emptive multitasking operating system with linear addressing, Windows and Mac OS offered those important features only years to decades later. The QL could run hundreds of jobs in parallel.
3. First PC with bundled Office suite (PSION XCHANGE offering wordprocessing, spreadsheet, business graphics and database).
4. First PC with a highly integrated two chip North-/Southbridge, IBM and Apple still used dozens of standard chips.
5. Innovative and timeless industrial design (case, motherboard and keyboard), Sony's Playstation 2 or some later Apple designs look very similar.
6. Innovative SuperBASIC Programming Language for Rapid Application Development (RAD),

years later Microsoft's Visual Basic closed the gap.
7. Even though only around 150,000 QLs were sold, one user became very important to the industry. Linus Torvralds used and programmed a QL before he created what became Linux."
Urs has also made a quarter centenary presentation:
http://www.cowo.ch/downloads/SinclairQLis25-compressed.ppt



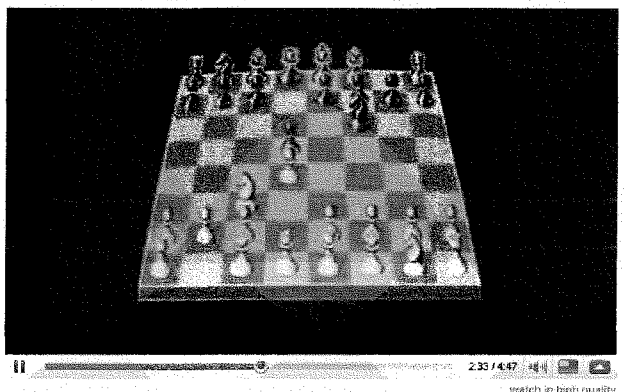
But was the 12th January celebration perhaps premature? The QL may have been launched on 12th January 1984, but it was to be another three months before the first QL's were shipped (complete with kludge) to the people who had ordered one in advance.

In their book "Sinclair and the 'Sunrise' Technology' Ian Adamson and Richard Kennedy write:
"The astonishing thing is that at the time the QL was launched there did not exist a complete working prototype of the machine....Note this was not a case of vapourware....nor yet a case where the hardware design was finished, albeit no geared up for production, nor even a bug ridden machine. It was simply an announcement of a machine for delivery in '28 days', of which a complete working example had never been seen, even within Sinclair Research's labs!"

Urs König is not the only person to celebrate 25 QL years on the internet. Two Spanish QL-ers have posted items on U-tube:
http://www.youtube.com/watch?v=bqOXsLIb3QQ
This video is a general celebration of the QL including the Clive Sinclair's famous "Quantum Leap" jump, but also showing a well known, but rather youthful, ex-trader.
http://wwwyoutube.com/watch?v=N0VGlRI3S-8
The second video is a nostalgic review of some QL software.

Sinclair QL 25 aniversario

Sinclair QL -afx machine- QL is 25



But was Clive's QL really a quantum leap? A bad name says Tony Firshman:
"Many have pointed out that that is bad Physics - a quantum is about the SMALLEST leap one can make."

Adamson and Kennedy are even more scathing:
"The supposed Quantum Leap in computing power after which the Sinclair QL was named apparently had more to do with the chaos of quantum unpredictability than the orderly behaviour of large numbers of particles."
And should we be celebrating the QL's 25th birthday?
No says Evert on one of the blogs to which Urs wrote:
"'25th birthday', as Urs König calls it, is a bit inaccurate. Something that is dead can't have birthdays anymore, and the QL died at the age of 2 years and 3 months... ;-)"
Perhaps Adamson, Kennedy and Evert should be invited to Quanta's quarter centenary celebration as guests of honour to see for themselves the present state of the QL's health. After all how many computers are still alive after 25 years?

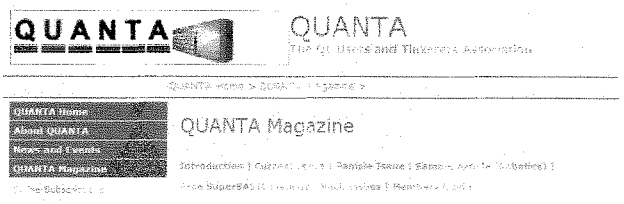
FORGOTTEN QUANTA?

In the general euphoria surrounding the 12th January commemoration Quanta's celebration of the event was almost forgotten, although Quanta news editor Dilwyn Jones was busy posting a

notice about QL is 25 on every blog referring to Urs König's initiative that he could find.
Quanta has now released more details of the event. "QL is 25" will take place over two days. On Saturday 18th April there will be a general workshop with a repair desk run by NEMQLUG, the Manchester and district subgroup. Talks will be held on the day by Simon Goodwin, George Gwilt and Steve Poole. As far as is known the only trader present will be RWAP services. QL Today understands that Dilwyn Jones, who has taken on responsibility for the Quanta library, will have an updated library disk at the show.
In the evening there will be a celebratory dinner costing £20.00. The price includes one drink and coffee.
On Sunday 19th April there will be a question and answer session in the morning and the Quanta AGM in the afternoon. This year's Quanta AGM is very important as the present officers have reached the end of their three year term. QL Today has heard persistent rumours that there could well be a contested election.
Quanta has negotiated single room rates of £47 and Twin/Double room rates of £53. Breakfast is included in the price. It is also possible to order a lunch at the workshop.
All room and meal bookings should be made through the Quanta secretary and not the hotel:
181 Urmston Lane,
Stretford,
Manchester,
M32 9EH.
EMail: **secretary@quanta.org.uk**
Quanta has been in touch with several famous QL names from the past, many of whom have expressed an interest in the event. However, it is not known if any, or how many, will be able to attend.

PAY ONLINE

It is now possible for Quanta members to renew their subscription online via the Quanta website and Paypal. Quanta hopes this facility will make it easier for overseas members to pay their subscriptions.
There have been a few teething problems. Some members wishing to pay online could not find the link on the website, because it had a flashing icon that was too easily mistaken as an advertisement for the facility.
You can also access the link by going to the Quanta Magazine page and clicking on the menu item on the left hand side (see screen shot).
There were problems for some Internet Explorer users who were unable to access the Paypal payment screen, but no reported problems with other browsers.
Investigation of the problem revealed that it was not a bug on the Quanta website, but a Paypal problem. Paypal attempts to place a tracking cookie on the user's computer and Internet Explorer users should, if necessary, lower the security on their machine to carry out the transaction.



A members' area has also been added to the website from where members and non-members can download Steve Poole's basic programs that have appeared in the Quanta Magazine.
Quanta has now managed to get the Quanta Magazine back onto its correct timetable and members received two copies of the magazine within a month.
The Aug/Sep/Oct 2008 issue contains a full and gracious apology to Tony Firshman for an inaccuracy printed in the Feb/March magazine and also for the lengthy delay in correcting the error.
The lead article in the Nov/Dec2008/Jan2009 issue is a plea by Duncan Neithercut for radical changes within Quanta. He argues that much that is being said about Quanta's future today echoes what was being said ten years ago. Although QL users are in decline the last ten years have seen significant developments in both hardware and software. Duncan suggests the Quanta Magazine should be closed allowing the subscription to be reduced. His proposals are to use the internet to keep members informed; to place the Quanta software library online; to set up a blog; to give access to a server site where members could post their own programs; and to back a competition offering a cash prize for the development of a simple QL browser.
In spite of numerous requests for QL Today details to be updated in the Traders Corner, this has not happened and Quanta members are still being told that QL Today is currently publishing volume 11.

SOFTWARE SECTION

George Gwilt not only regularly challenges QL Today assembly writer Norman Dunbar with the dialogues that have become a feature of recent issues of QL Today, but he now appears to be challenging Dilwyn Jones for the most updates

of software between issues of the magazine. Such is George's enthusiasm that he even released details of one program on Christmas Day.

GEORGE POINTS THE WAY

George's work developing tools for pointer environment programmers include the following:

EASYPEASY

"EasyPEasy is intended to make it easier to write PE programs using Assembly Language."

OUTL

"I have added a program, OUTL, to my website to illustrate resizing of a PE window by dragging its outline."

About a fortnight later George announced an update:

"I have now refined the program showing resizing a window using an outline. It is perhaps in a state that allows programmers to use it in place of WM_CHWIN for resizing. It still requires a user to click on the icon and then hold down the mouse button to drag the outline. I have not found how to eliminate the first click. This time the source code can also be downloaded so that anyone keen enough could provide some better code."

George has announced a number of other updates:

SETW

"Norman Dunbar's recent article in QL Today on PE with assembler taught me that there are two things you can do with PE windows of which I was previously unaware.

First you can arrange for each main window and for each sub window that it will not be cleared when it is first drawn or redrawn.

Second you can arrange that for each main window and for each application window you can stop the arrow keys from moving the pointer.

A new version of SETW, which produces PE windows for S*BASIC (TurboPTR), C (CPTR) and Assembler, is now available.

This version allows the user to set the windows for clear/don't clear and keys move/don't move the pointer."

GWASS

"This allows assembly of programs with COMMON sections in devices other than RAM. In particular you can use WIN, FLP and DOS. Previously you could only use RAM."

Finally George announced two further changes.

"1. UCONFIG, which produces config blocks for S*BASIC, C and Assembler, now gives a correct label for Assembler strings.

2. SETW, which produces window definitions for S*BASIC, C and Assembler programs, now sets the correct pointers for user sprites.

The updates will enable config blocks to be used with GWASL and will allow correct semi-transparent sprites for mode 31 and correct patterns for modes 31 to 33 to be produced by the sprite routine in TurboPTR."

All George's programs can be downloaded from his website:

http://web.ukonline.co.uk/george.gwilt

DILWYN JONES

Dilwyn Jones has updated several of his programs:

ZIP MANAGER v1.05

"Fixes a bug in the View command which caused display corruption and adds three new facilities:

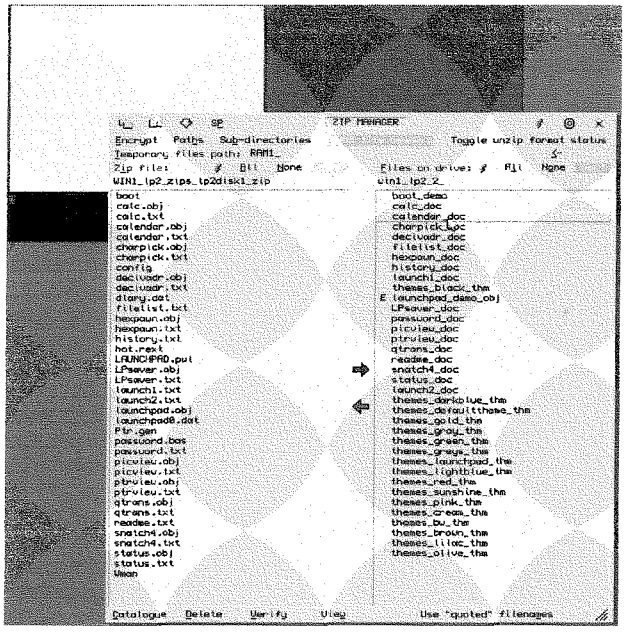
1. Allows non-QDOS archives to be created.

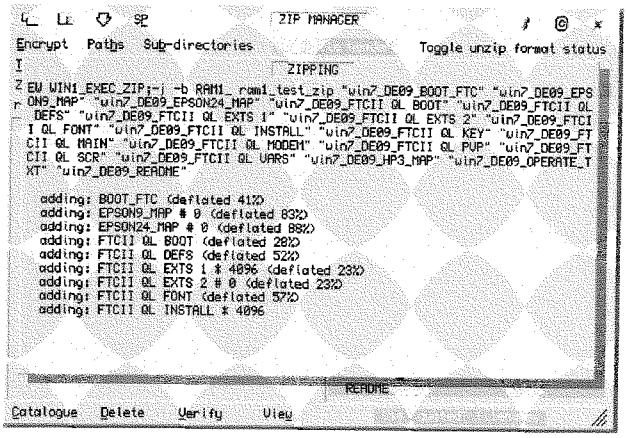
2. Toggle configured Unzip format status. Assuming your copy of unzip is normally configured for QDOS format, this toggle lets you temporarily invert the setting, e.g. when unzipping Lear PCB Cad Unzip converts the '.' in filenames to '_' which is not what is needed for PCB Cad, it uses '.' in the filenames.

3. Allow filenames to be quoted, to allow Zip and Unzip to correctly handle files which have non-standard characters like spaces in the filename, e.g. Quanta library demo disk 9 (DE09)."

Zip Manager may be downloaded from

www.dilwyn.uk6.net/arch/index.html





PTRVIEW v2.02

"The pointer driven text file viewer from the Launchpad suite is also available on the Launchpad downloads page as a stand-alone freeware utility. Version 2.02 changes the program to use dynamic scaleable menus instead of the fixed selection of sizes in the previous version. It also allows filename lists to be sorted and to be filtered by specifying an extension, e.g. only _TXT or .TXT files. A few minor bugs have also been fixed. If you wish to update your copy of Launchpad version 2 just overwrite the two files in the package (ptrview_obj and ptrview_doc). The old version 1 of PtrView has not been updated."

www.dilwyn.uk6.net/gen/launchpad/demo/demo.html

LEAR PCB CAD UPDATE

Malcolm Lear has updated his PCB Cad program again, this time to v6.62 to correct a problem with Gerber export introduced in the last version: "Removed negative gerber image problem introduced in version 6.61. Gerber-X export now embeds only the apertures required on a file by file basis. High density track mode now plotted with correct width."

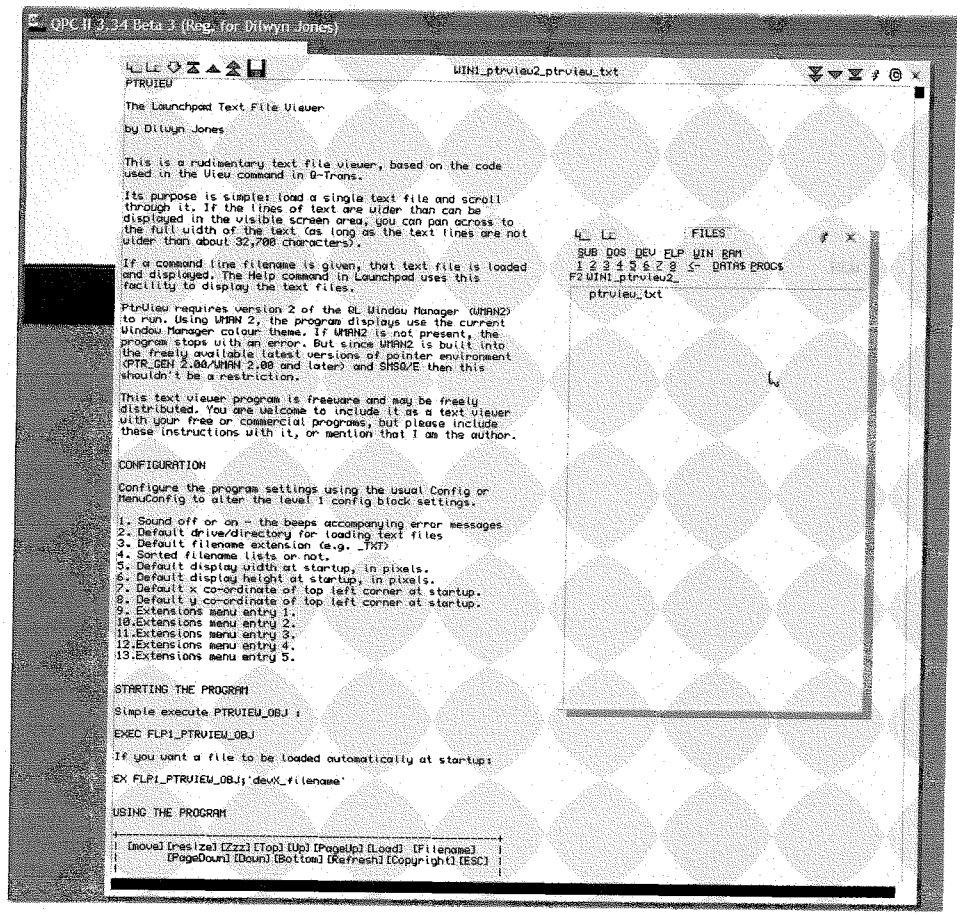
There is also a further update to v6.63:

"Extended filename maximum length from 8 to 10 characters. DOS compatibility deemed unimportant. Board physical construction information now included in the readme.txt file on automatic gerber export. Fixed program crash when picking up component after failed library search. Label layers changed as well as elements when loading old files."

Should circumstances permit Simon Goodwin hopes to give a presentation of this program at Quanta's "QL is 25" event, and possibly also a review in QL Today.

QL ON A STICK

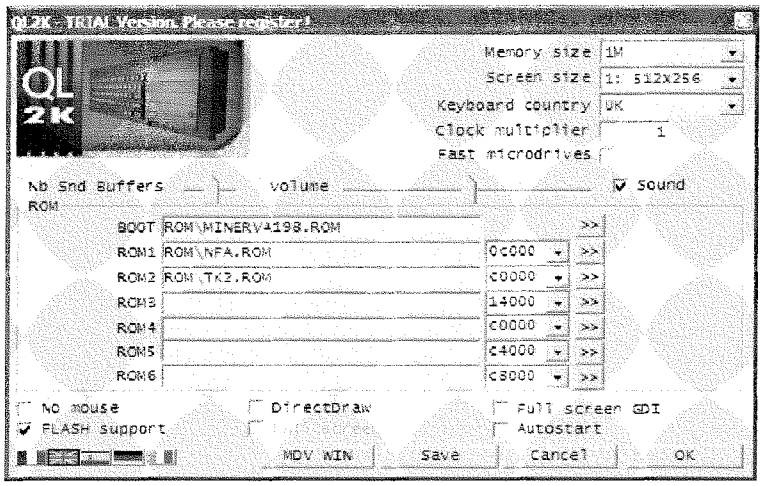
"The QL On A Stick package has now been updated to include the latest versions of QL2K from Jimmy Montesinos. QL2K version 0.1 build 101 is supplied in two versions, a 32-bit version and a 64-bit version for Windows Vista users, who should use the appropriate version for their system.



The latest QL2K has enhanced sound support under Vista. This was due mainly to differences on sound hardware and Jimmy and his team have found a workaround to fix this. Using it, you may not have the bad noisy effect under vista. So there is now a slide control that helps you to manage this parameter for the value arbitrary names "Nb Sound Buffers" and the value can vary between 3 to 7. This should mean 3 to 7 buffers of 40 ms.

Jimmy has now supplied a new QL2K icon and image. Jimmy says he has tweaked dialog boxes and unregistered users have now to wait 5 seconds with the register

message before they can use full QL functionalities. This does not "cripple" the emulator in any way, which still has full facilities, although it does remind you to register the emulator free of charge to benefit from the author's update news, for example.
The latest version of the QLAYT tools program has also been added. This is also present in 32-bit and 64-bit versions and is supplied to help users who had problems with the old version on some systems.
QL On A Stick is supplied on a CD-R ready for you to copy onto a USB stick of your choice. It costs just £5.00 from Dilwyn Jones or from Q-Celt Computing in Ireland."
Further information on QL On A Stick is available from Dilwyn's website, at:
http://www.dilwyn.uk6.net/qos/index.html



NORMAN'S STRIPPER

Norman Dunbar has now released the code of his QStripper program. He writes:
"Time flies these days doesn't it? Must be because I'm getting old.
I remember announcing a while back that QStripper, my program for taking a quill file and converting it to text, html, DocBook XML, or PDF would be made available on Sourceforge 'soon'.
Well, 'soon' turned out to be quite a long time coming, however, the source code is now available for all to see and play with.
The main repository is:
http://qstripper.svn.sourceforge.net

The following is a list of commands for any Subversion users who wish to checkout the source code into a directory of their own.
(It's based on what I have just done, so adjust for your system.)

```
cd src mkdir qstripper cd qstripper svn
checkouthttp://qstripper.svn.sourceforge
.net/ svnroot/qstripper ./
```

And that is all there is to it. If you just want to export the source without the baggage required by svn then replace the last line with :

```
svn export http://qstripper.svn.source
forge.net/svnroot/qstripper ./
```

(You may need --force after 'export' in the above if you get an error about '.' already existing.)
Now, assuming you have QT4 on your path to build the program it is as simple as this:

```
qmake -makefile make
```

Windows users, the same commands will work assuming you are using the mingw system with QT4.

To run the generated program:

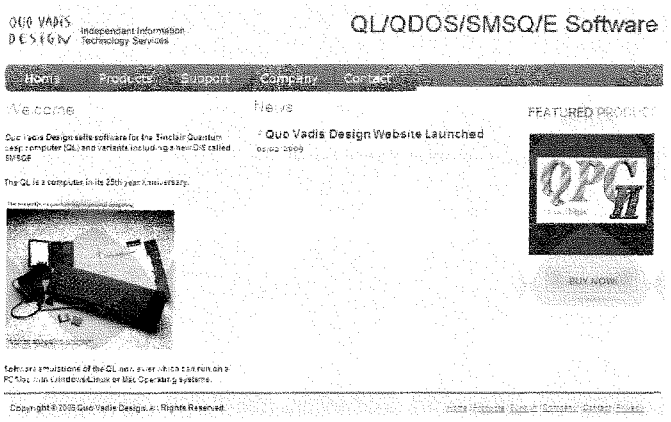
```
./QStripper
```

Easy or what?"

TRADER NEWS

QUO VADIS DESIGN

Bruce Nicholls has set up a new online website using his old QL name to provide a UK outlet for Jochen Merz products, including QL Today subscriptions. The company website is at:
www.ql-qvd.com
Payment can be made by Visa or Mastercard, Paypal or cheque.



RWAP AND TF SERVICES

Rich Mellor has taken over Tony Firshman's QL stock except his own products for commission sale. Although Tony still has components for these products he will not be making any more Romdisqs. Other products can still be made although low sales of these in the last four years

mean that it is not worthwhile to order more components. Tony will be keeping a skeleton stock for QL repairs, but he still faces heavy demands on his time that severely limits his QL activities.
In a Christmas message to his customers Rich announced some new products for 2009:
Replacement Faceplates for the ZX Spectrum - £10 each
Replacement rubber mats for the ZX Spectrum
More DivIDE Plus Interfaces (we promise!)
Rich will be present at Quanta's QL is 25 event.

WEBSITE CLOSURE

The Just Words! website was due to close on 15th February. The hosting company, Lycos, is ending all unprofitable parts of its business. Although a promise was made that hosting would remain until at least the end of March, the closure was unexpectedly brought forward to mid February.
Just Words! announced that it is uncertain if or when the site will reopen. Given that the site has just 9 visitors per week consideration has to be given to the cost effectiveness of the time investment in maintaining the site.
Should the site reopen Just Words! intends to use more professional hosting with a shorter and easily remembered name.

WEBSITE UPDATE

Malcolm Cadman has made some changes to his website:
"I have reorganised new links to the Rick Dickinson, Industrial Designer, archive of designs for various Sinclair projects that he was involved with. Which are now becoming classic designs. As well as more recent work.
I noticed before Xmas that one of the links to the QL designs was broken.
Rick has recently changed the "Flickr" references. Which are now even better organised, together with a lot of new design information added too.
So, the links on my site now reflect the new changes:
http://www.mcad.demon.co.uk/lquan.htm
Navigate to near the bottom of the page, to find the new links that are made available.
I would highly recommend that you take a look at this material."
Malcolm Cadman also has an interesting story to tell which illustrates the importance of websites:
"I have recently been in communication with Adam Denning, the author of Advanced QL Machine Code.
Adam had spotted the book on my web site, in the "Retro" section and contacted me to say that, although he was the author he did not have a copy of the book himself!
I was able to post the copy to him in the USA, with the post and packing charge only, as well as a donation to the London QL & Quanta Group.
Adam is working at Microsoft, as does Andy Pennell, another author of machine books on the QL.
I have informed Adam of the "QL is 25" forthcoming Event.
Once again, I think that this shows the loyalty of those that have been involved with the QL still feel for it."

ADDRESS CHANGE

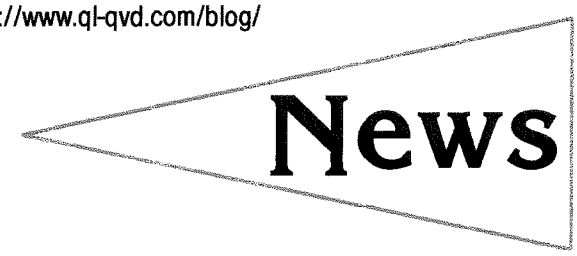
QL Today's editor has not moved, but has changed his address. About six months ago his efficient permanent postman was replaced by a series of temporaries whose delivery standards are much lower.
Post addressed to 5b is being delivered to house 56 and 5B to 58. Both houses have the postcode DE24 9HP which is very similar to the editor's postcode DE24 9HQ.
QL Today post has gone astray in this way.
The Editor suggests the use of the following address to avoid this ambiguity:
Flat 5b, Wordsworth Avenue, Derby, DE24 9HQ.

Plus4Patch Update

Marcel has updated the text87 plus 4 patch for High-colour. A user reported problems with window save and restore, and also with the spellchecking.
The new version of the patch program is V1.05 and can be downloaded free of charge through the JMS Update site for registered users.
For more details visit
http://SMSQ.J-M-S.COM
or go directly to
http://UPDATES.J-M-S.COM
if you are a registered user.

Final news

Quo Vadis Design now has a QL News blog for those who wish to monitor QL/QDOS/SMSQE News Updates via RSS.
http://www.ql-qvd.com/blog/



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The Birthday of the QL

The following text and pictures are a short extract from "The Sinclair Story" by Rodney Dale (ISBN 0 7156 1901 2)

Tony Tebby
systems designer

Alison Maguire
software manager

As 1983 drew to a close, work on the ZX83 (or would it be the ZX84?) became more and more frantic. Language proliferation caveats were thrown to the winds, and a new dialect of BASIC - SuperBASIC - was devised for the machine. Together Roy Atherton (who was writing the manual) and Tony Tebby and Jan Jones who were writing the interpreter - the program which translates your instructions to the computer into a form which it can understand - pushed ahead with its development. At the beginning, Tebby was telling Atherton what the machine would do; as the project progressed, Atherton was telling Tebby what the manual said it would do.

What was the machine going to be called? Suggestions were invited from within the Sinclair organisation, perhaps the most memorable being, in honour of Sinclair's favourite colour and recent honour, the Black Knight.

One day my telephone rang; it was Alison Maguire, software manager:

'We've got a name for the new computer.'

'Yes, what?'

'Hold on, I'll just shut the door . . It's Quantum Leap, QL for short.'

There was very little I felt I could say. Looking back on it, one wonders why all the secrecy. And those two letters - QL - which seemed so novel then, now conjure up an image of a particular computer and all the surrounding controversy.

The launch date of the QL was fixed for 12 January 1984. That it was far too early a date is now well known, but just who realised that at the time when it was fixed is unclear. As we have said before, it was part of the Nigel Searle management technique never to prepare any sort of schedule showing who was going to do what and by when. Such an approach, he averred, leads people to take more time than they should. If you tell them the launch date, it gives everyone something to aim at. So Sinclair management 'agreed' the launch date with the engineers, with the proviso that the product would not be ready to ship in bulk until the end of February 1984. The launch date was decreed well before Christmas, and when you're working at high pressure, two or three months ahead seems long enough to do anything in.

Another factor which no doubt played a part in the decision was the fact that industrial designer Rick Dickinson had already produced the elegantly styled case of the QL, since tooling for the mechanical parts of any model has to be put in hand sooner rather than later. Having such things to play with can give one a false sense of the proximity of the completion of any project.

But perhaps one of the most powerful reasons for making the announcement was that it seemed as though the competition were aiming at the same gap in the market (the low-priced business computer) - IBM with its PC, Apple with its Macintosh, Commodore with its 264 and, last but by no means least, Acorn with its Business Machine. Perhaps it would have been better to start rumours about the ZX84; there was, and never had been, any experience to show that the competi-

tion was likely to get a better machine out faster.

Sinclair Research was riding high on the Spectrum - the most successful single product in the company's history, and the most successful home computer. Everything was going to take a quantum leap. The company commissioned designers Wolff Olins to produce a new typographic image; they specified a typeface called Syntax which, until that time, very few people had heard of. At least it would ensure that Sinclair advertisements and literature would have a 'different' look about them, even if readers couldn't quite work out why.

The launch at the Inter-Continental Hotel, Hyde Park Corner, was spectacular: either the name of Sinclair, or the promise of breakfast, was such that some computer journals sent the entire staff to find out what was going on. By 10.30 everyone had trooped into the conference room and Nigel Searle introduced Clive Sinclair, who described how the QL had come into being, and unlocked the secret that QL meant quantum leap. 'Many of its advanced capabilities, such as multi-tasking and multi-window display, are normally only available on machines costing several thousand pounds' he said, perhaps it was the mad scramble to the phones which resulted in one journal quoting this as '£7000'.

Sinclair in action at a press conference on a good day is a force to be reckoned with, and he received an almost standing Ovation.

Nigel Searle then described the capabilities of the machine, and large screens around the hall echoed visually the content of his speech. A multicoloured picture of a room was built up, a picture frame appeared on the wall, the picture which appeared in the frame was a small version of what was already on the screen, another frame appeared, and so on. When the last dot - which we knew was the last picture only by analogy - appeared, snow started to fall past all the windows. A clever way of demonstrating the way in which the screen could be divided up into sections, each controlled independently.

Generally the questions from the floor showed that the press was well disposed towards the QL and the company producing it. 'Where can I buy one?' is always a good opener at a product launch. However, someone did suggest, to general murmurs of approval, that if you bought a machine at £399, the postage and packing (for any order over £390!) of £7.95 would bring the price above £400. Such pricing policies must be counter-productive.

We were also introduced to the QLUB (QL Users' Bureau) which all QL users could join for a year for £35, thus becoming entitled to one free update of each of the four software programs, and six bi-monthly newsletters - generally thought to be a good idea.

When the formal part of the presentation was over, Buck's Fizz was handed round and David Potter (Psion's Managing Director) and his Psionists were on hand to run displays of the software and answer questions. Sinclair, Searle and especially David Karlin - who had been responsible for most of the electronics design and had been inside the machine pulling the strings - relaxed and mopped their brows. The launch was nothing if not lavish; everyone left the hotel clutching extremely glossy brochures and copies of the QL manual - almost as good as having a QL.

Rick Dickinson
industrial designer

Nigel Searle
managing director

David Karlin
electronics designer

QL Today Critics

Some QL Today readers who are not Quanta members have been sharply critical of the magazine's coverage of the dispute between the editor and Quanta's chairman.

One wrote;
"I think your personal dispute with Quanta has now crossed over from legitimate reporting of another QL faction to needless and tedious self-justification and a waste of at least two pages of the mag."

A second person wrote:
"One thing that has annoyed me in the last two issues is the amount of space used for describing the disputes between Geoff Wicks and Quanta: this stuff doesn't interest me at all, as far as I'm concerned it is just a waste of space."

QL Today's editor comments:
"I can understand the irritation of both readers and am grateful that they have been so direct in their comments. Unfortunately both the Quanta officers and members have refused to enter into a dialogue with QL Today. Quanta has not taken up our offer of a right of reply, nor have they allowed the editor a reply to the chairman's comments in the Quanta Magazine. This makes the chairman's comments libellous under British Civil Law.
Instead of dialogue some Quanta members have resorted to unsavoury tactics such as poison pen emails and schoolboy type jeering at meetings. In the circumstances we found it necessary to demonstrate that QL Today has been very fair in its coverage of Quanta matters."

QL Today's offer of 2,000 unedited words is still open, even if Quanta is not prepared to reciprocate. The offer will remain open for the new chairman and officers of Quanta after the AGM in April. ■

QL Today Suggestions

On the positive side, we got encouraging responses telling us that it would be very sad if QL Today would not continue.

The majority of our readers (at least those who replied) prefer our 32 pages DIN A4 solution over every other solution (like going to DIN A5 or only 3 issues or whatever). We, the QL Today team, feel, that we should not reduce the number of issues. 4 issues per year is fine.

The suggestion of using 80g/sqm paper for the cover instead of 160g was also take as a positive idea for the change, as this allows the magazine to be left open easier, or wrap it easier.

One reader suggested not to drop the price, as he honours the work and thinks, it is worth much more. Great, we like this idea, but we fear that increasing the price would reduce the number of readers. Of course, earning at least a little bit of money would help. He also suggests, if the price is decreased, a "solidarity subscription" where readers can pay the old subscription price (or even more), if they like.

Thanks for all the positive feedback, we will think about it and see what we can do. We are happy about the encouragement and will continue with QL Today as long as we feel there's support from our readers. ■

A tale about characters

by Marcel Kilgus

In the last issue I read an article about printing special characters in QPCPrint, even including a character table. As this is only half the truth I try to provide a bit more in-depth explanation on what characters can be printed. But perhaps some (compressed) history is in order first:

Back in the old days life for a programmer was easy. One character had 7 bits and thus could represent a stunning 128 different characters. There were many competing standards that defined which number represented which glyph, but eventually ASCII (American Standard for Information Interchange) became prevalent. After all, 128 characters were plenty for English texts, there were even some spots left that could be filled with (today mostly useless) control codes. So at last this defined that the number 48 for example stands for a "0" and 65 for an "A".

Most other countries however were not so lucky, as their languages have far more letters and these didn't have a place in the 128 characters defined by the Americans. Luckily the 8 bit age came to the rescue, providing computers with another whopping 128 possible numbers! The question then was how to fill these new spaces. Everybody and their uncle had an idea how to do so, and thus the 8-bit character sets were born, in fact there are far more standards in this area than I can count with my hands and feet combined. Almost all of them had in common that the first 128 characters were identical to the set defined by ASCII, but apart from that, all bets are off.

Need more information about QPCPrint? Visit http://printer-emulator.j-m-s.com/

So what does that mean in practice? It means that for example the number 150 in itself is completely meaningless as a character. You don't know what will be printed on screen or on paper if you don't also know which character set will be used. In the PC437 set, the standard for western DOS PCs, it is a "u" with circumflex (û). On most QL ROMs, it is an "o" with an acute accent (ó). On other systems it is yet again something different. It was and sometimes still is a complete mess, causing pain and frustration for generations. The answer to this mess by the way is called Unicode, the effort to unify everything into a gigantic character set with currently over 100.000 glyphs (obviously using more than 8 bits to represent all), but that is probably a tale for another time.

So, getting back to the topic at hand, which character set does QPCPrint use? The answer is a strong "depends". It depends because QPCPrint offers many different character sets, 17 to be exact. The character set used can be changed in the QPCPrint configuration dialog on the "Defaults" tab and during a print run via control codes. If nothing is configured QPCPrint defaults to the PC850 character set, the successor to PC437 which was very often used in conjunction with Epson printers. And this, in fact, is what George found out and what was printed as the character table in the last QL Today issue. But to call it the "QPCPrint characters" is plainly false as with only a few clicks in the configuration the table would look completely different. ■

Additional Information

USASCII code chart

b7 b6 b5 / b4 b3 b2 b1	Column → 0	1	2	3	4	5	6	7
Row ↓ 0 0 0 0	0 NUL	DLE	SP	0	@	P	`	p
0 0 0 1	1 SOH	DC1	!	1	A	Q	a	q
0 0 1 0	2 STX	DC2	"	2	B	R	b	r
0 0 1 1	3 ETX	DC3	#	3	C	S	c	s
0 1 0 0	4 EOT	DC4	$	4	D	T	d	t
0 1 0 1	5 ENQ	NAK	%	5	E	U	e	u
0 1 1 0	6 ACK	SYN	&	6	F	V	f	v
0 1 1 1	7 BEL	ETB	'	7	G	W	g	w
1 0 0 0	8 BS	CAN	(	8	H	X	h	x
1 0 0 1	9 HT	EM	)	9	I	Y	i	y
1 0 1 0	10 LF	SUB	*	:	J	Z	j	z
1 0 1 1	11 VT	ESC	+	;	K	[	k	{
1 1 0 0	12 FF	FS	,	<	L	\	l	|
1 1 0 1	13 CR	GS	-	=	M	]	m	}
1 1 1 0	14 SO	RS	.	>	N	^	n	~
1 1 1 1	15 SI	US	/	?	O	_	o	DEL

(from Wikipedia.org)

Useful links: http://en.wikipedia.org/wiki/ASCII

Continental Nostalgia

by Bob Spelten jr

Geoff's story "A Continental Puzzle" in QL Today v13 i2 made me go all nostalgic. I first came to the Eindhoven meetings in the early 90s and have visited most of them. At one time I even had Tony Tebby tinkering at my QL trying to get an early version of SMSQ/E working. He explained what was happening and I pretended to understand. On one of the photos you can see Jochen Merz, François van Emelen and me testing the latest update of Menu_rext, hot from Jochen's laptop. Being able to show Jochen my problems with it proved to be very fruitful. BTW, the problem I reported on the QL-User list when using version 8.00 on Aurora and QXL has been solved by Jochen so it should be usable now on all platforms that run SMSQ/E. I do hope the Sin_QL_Air committee can find a way to continue meetings like Eindhoven.

Further in the article Geoff Wicks accuses me of working for a major computer company. That also prompted this reaction because his mole at the Sin_QL_Air headquarters must have fed him some misinformation.

I did in fact work for the Dutch branch of an international advertising agency which in turn worked for a computer brand and there I have done a lot of work for them. As an art-director I worked on the introduction campaign for the HP-150 desktop computer which was launched in Europe in march 1984, so also 25 years ago.

[ED. My apologies, but my "misinformation mole" was Bob, himself. I once saw him using one of the computer brand's give away bags and had a conversation about the company and the people who worked there including my former boss. I wrongly assumed that he was an employee of the company.]

HP was well known for their calculators, medical- and laboratory instruments and plotters. Computerwise they were more into mini-computers and workstations (mini at the time was cupboard sized as opposed to room sized mainframes). There were also standalone desktop systems but these were usually specialised to process the instrument data or for things like CAD systems.

A sensitive machine

This new HP-150 was their first attempt with a business machine at the fast growing personal computer market. Never before had they made so much publicity in print and TV advertising for a single computer. I don't know how successful this machine was or if they even threw it a 25th birthday party but they succeeded in surpassing "Big Blue" in the end as a PC company. Be it after they had become IBM compatible.

It was an Intel 8088, 8MHz based machine with a minimum of 256Kb memory, all contained within the 9" (512x390 pixels) green monitor housing which could also hide a thermal printer on top. This box was connected to a second flat box holding single or double 3.5" disc drives, using single sided 280Kb discs of which 256Kb could be used for files. Also a choice of 5Mb or 15Mb Winchester drives, printers and plotters was available. All connected through scsi-like HP-IB (IEEE-488) cables. It had an XT-style keyboard connected by a cable using RJ11 (phone) plugs.

Its main feature was fingertip computing by "PA.M." (Personal Application Manager), a software shell on top of MSDOS 2 which could be controlled with your finger or pen through the touch sensitive monitor which was actually a grid of 21 by 14 infrared lines in front of the screen.

There was the usual range of software: text (MemoMaker), spreadsheet (VisiCalc), database (Card File), Graphs (Graphics) and Basic. This was available in the local language and could also be partly controlled by the touch screen, all to make it more user friendly.

Getting my hands on one

At the agency there were only 2 computers at that time. One Honeywell mini for the accounting and one IBM XT-PC at the media buying department. Surely we had to have this new machine so one was bought for the

financial manager, which I was not allowed to touch of course. I was granted time on the IBM sometimes, already being ZX81 and Spectrum savvy. By 1989, the number of PC's had grown but still none on my office desk, I finally got my hands on this HP-150 and started my first databases on it for our collection of TV commercials and videotapes. When we got a proper network of Compaqs I took it home and it lived in the attic since.

My machine has 512Kb of RAM, the double disc station and a Dutch keyboard, costing a total of about 7,750 euros at the time (excl. VAT and applications). I have the original discs including MSDOS 2.11, MemoMaker, VisiCalc, WordStar and Lotus 123. The last one I used for my databases, which might explain why I like the spreadsheet look of SuQcess. I also have all the manuals plus some extra info including the dealer price list and press clippings. For its 25th birthday I started it up again. The drive lift/eject mechanics needed some servicing but I can still run P.A.M., the demo disc and the applications. Sadly the second drive is not spinning, making it useless as a data station.

Reviving the feeling

Touch screens are hot again and although this feature was dropped when the successor of the HP-150 came out, they are promoting it again under the name "TouchSmart". While waiting for a haircut I read in a recent publication they even boast about "25 years of development in touch-technology design", thus referring back to the HP-150. A quick search on the internet gave lots of hits on "HP-150", so it's not forgotten yet.
1984 seems to have been a good year for the non-compatibles.

[Ed. We have had numerous reactions to articles in the last issue and some of them are on the borders of on/off topic. Bob was worried that some readers might object to this contribution, but I found it a useful reminder of the computer environment into which the QL was launched. Sinclair products were a price breakthrough that made computing available to a much wider group of people, and several of our readers have had careers in computing that started with a Sinclair machine.] ■

Configuration Block Utilities (Part 2)

by David Denham

FileCfg

Timothy Swenson has built upon Basconfig and completely changed how you use it, by adding a facility to write a script or "definition file" which FileCfg reads and builds into a config block using Basconfig extensions, rather than the approach of seemingly endless questions and selections that the Basconfig programs asks. This means you can recreate or adapt an existing config block, e.g. change a data type or add another item, which makes it much more versatile.

FileCfg is really an add-on to Basconfig to improve functionality. It needs the Basconfig extensions, so FileCfg is not a stand-alone application, but rather just changes the way you create config blocks with Basconfig.

It currently only handles level 1 config blocks, because it uses the extensions from Basconfig to create the Config block. The file cfg_bin from Basconfig must be present, as this is used as the basis of the superbasic extensions which form the basis of the config block created, and the output file is given a name of OUT_CFG in the DATA_USE directory, which you can then copy or rename to wherever it is required. Note, though, that if that file already exists it is overwritten without error, so be careful!

The fileconfig script file is a simple text file, laid out in the manner expected by FileCfg. It consists of 2 characters which identify the data which starts from the 4th character, usually separated by a colon symbol. The two characters aren't usually significant, but serve to identify what that line of data is to you, the user. See figure 4 for an example script or definition file.

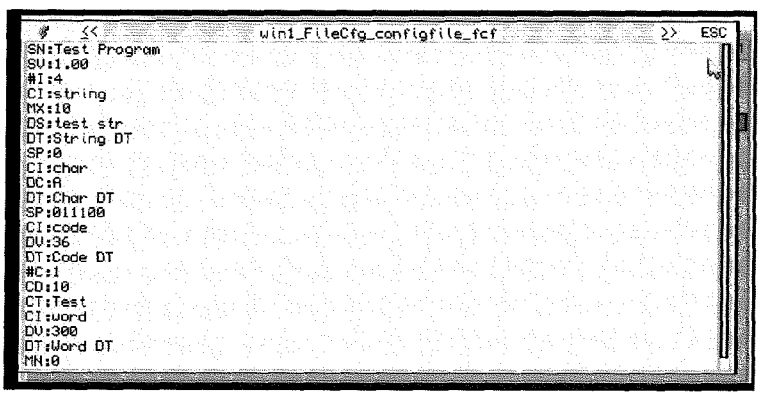


Figure 4: Example of a definition file

The first line in the example shown consists of SN:Test program. SN stands for Software Name and "Test program" is the name of the program, the string returned by the extension C_NAME$ (in cfg_bin of Basconfig). Fileconfig only looks at the data from the 4th character onwards, so you could use PN: for Program Name instead if you wish, for example.

Timothy kindly supplied the source for FileCfg, so you can adapt or rewrite it if required. It is supplied in Structured SuperBasic or _ssb format, which is intended to be used with his Structured SuperBasic package which compiles programs modules without line numbers (hence the name) using QLiberator. The _ssb files are plain text versions of Superbasic programs which you could turn into superbasic programs by adding line numbers and merging the various modules (careful about overlapping line numbers!). The _ssb files are quite readable and are basically structured basic programs without line numbers and without goto and gosub statements.

The process of building a config block is as follows:

1. Decide on what is to be included in the config block.
2. Create a definition file in a plain text editor.
3. Use FileCfg program to "assemble" it into a config block, tacked onto cfg_bin to create a new file called out_cfg which includes the necessary extensions and the config block data.

The command needed is:

```
EXEC fileconfig_obj;"script_filename_fcf"
```

There is little by way of error trapping and warning messages (in fact, it has no screen output at all if nothing goes seriously wrong) and has the feel of "written by an engineer for an engineer" about it, as you might expect of a programmer's tool like this.

Verdict: A very useful add-on for Basconfig which makes it possible to alter and recompile config blocks by creating the "template" for the config block in a plain text editor. The process can be tedious

(but no more so than using Basconfig!). Like Basconfig, can only create level 1 config blocks. Very little by way of error trapping in the program - you have to know what you're doing and get it right!

U-Config

This is George Gwilt's config block generation program for Turbo Compiler users. It can also create assembler and C program config blocks. Additionally, it can alter an existing block, which is a unique feature among the programs reviewed here. George originally released T-Config purely for Turbo users and recently updated it to U-Config (which stands for Universal Config).

The program is not pointer driven (neither is any of the programs described here) but has a nice compact screen display and a very easy to use interface. The mechanism for adding Config blocks to basic programs differs significantly from that used by Basconfig, for example.

When it starts it has a very simple 3 choice menu. See Figure 5 - basically it can create a new config block, modify an existing one, or just quit.

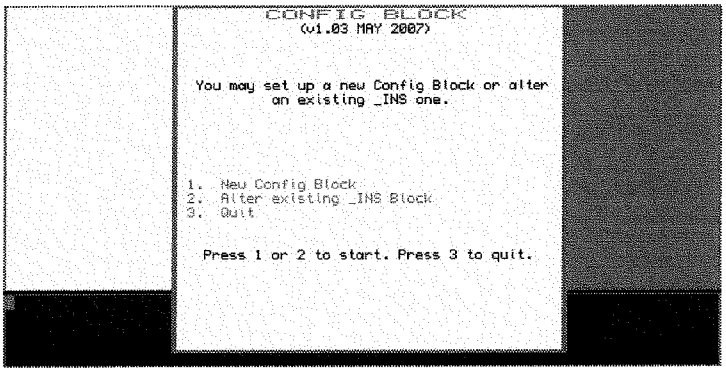


Figure 5: Uconfig opening screen

Select 1 to create a new config block, then enter a name for it, which should contain no spaces. It then takes you to a screen to enter further details, see Figure 6.

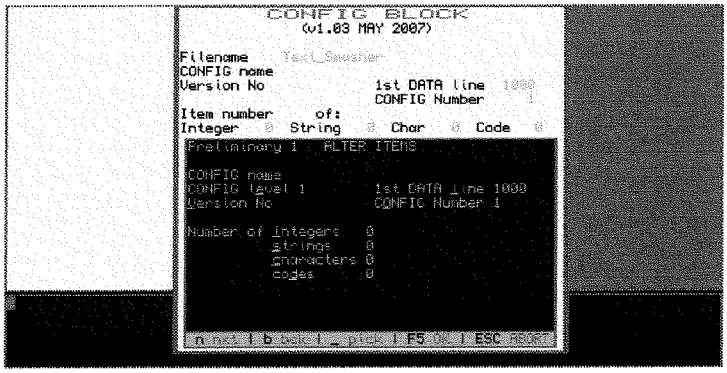


Figure 6: Config block details screen

Here you can enter a name, a version number, config level 1 or 2, any of up to 8 config blocks for insertion into one program, the number of string, integer, character and code data types and a data line for generation of data statements containing the configuration block data which can be read by a basic program. For basic programmers, here lies the main difference in the way of working when compared to Basconfig. As far as I can tell, U-Config only supports 16 bit word integers, like basic integer variables, and so does not support byte or long word integers.

This section is referred to as "preliminary stage 1". Once you have entered the information required in this screen, press F5 key for OK to move on.

Now we come to "preliminary stage 2" if you requested any CODE type of data. Here you have to specify how many choices for each CODE item, so if you are setting up a code item which will let the user of your program choose to configure something as YES or NO, you would enter 2 for that CODE item here. Make sure that you read the instructions file carefully, as there are a number of options listed which may not be immediately obvious, such as the use of the Next and Back options, which don't apply in some screens but are still listed in the prompts at the bottom of the screen.

If you had requested integer items, the next screen asks you to enter a description text for the item and the minimum and maximum values it can take. The default value for an integer is automatically set as the minimum of the range of values it can take.

The next screen asks you to specify the details of the Char data type. You need to specify which of the various character ranges it can take, such as upper case letters, lower case, numbers, non-printable, etc. The range selected (more than one can be selected) changes colour to indicate it is selected. You also need to enter a description text.

At first, the Code attributes screen can be a little complex, but having used it a couple of times you get used to it. See figure 7 on the next page for a glimpse of how it is used.

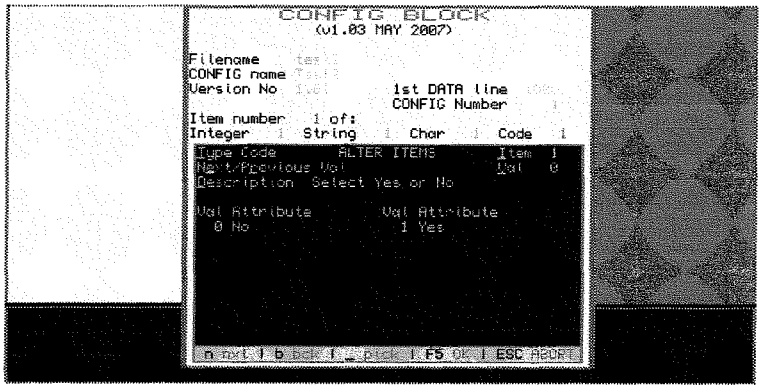


Figure 7: Entering the Code item details

If there's more than one Code type item, select the item required with the Item command. Then, for each value that item can take, you need to match a number with a text attribute. In figure 7, the item concerned can only be 0 or 1, shown as the text No or Yes. Whichever value you wish to alter is selected with the Val command, which prompts you to enter a string for that Code value.

Hey, nobody claimed Config blocks were the easiest of subjects! Actually, it sounds worse than it really is.

If you've realised you've made a mistake with one of the types, as long as you've entered valid details for the current type, you can use the Type command to switch between the others, e.g. if while entering the Code details you realise you've made a mistake in Char, finish entering Code details then switch to the Char type and amend that.

If you use Level 2 config blocks, you will also need to go through the process of entering the item IDs. Level 2 config IDs are discussed above under Q-Config. See Figure 8 for an example of entering a single integer item for a level 2 config block.

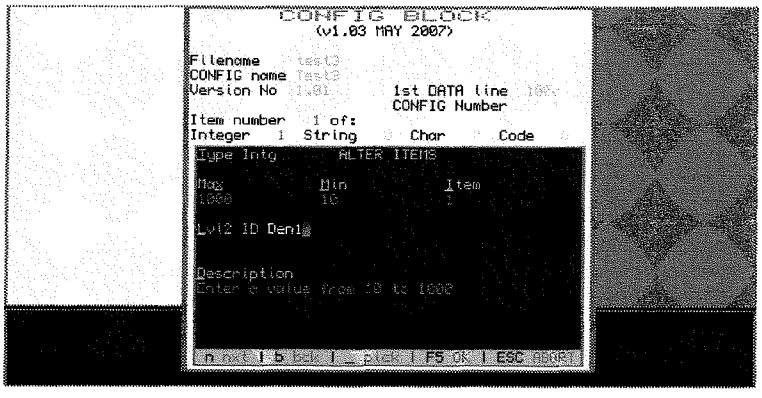


Figure 8: A level 2 config block item

Once you have defined everything the program will then proceed to save configuration block items and produce output for basic, assembler and C programs as files in ram1_ which you can then make use of in your programs.

If you asked it to use the name Test for the config block files it creates four files, called Test_asm (for assembler), Test_h (for C) and two files for basic, Test_dta and Test_Ins.

The assembler file is a long list of dc.w statements and a few EQU statements which can be included in an assembler program, providing the pointers to find parts of the data.

I know nothing about C, so I'll include the sample Test_h file here and hope it means something to readers who know about C. You will find the listing in the box on the next page.

The program produces two files for basic. Test_dta is a set of DATA statements to be merged into a program. Here is the sample I created using the same data as the C example:

```
998 DATA "$œ#*", "test
!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!
!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!
!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!
!!!!!!!!!!!!!!!!!!!!!!"
1000 DATA -4444:rem Integer value
1002 DATA -4444:rem Char type
1004 DATA -4444:rem Select Yes or No
1006 DATA "XX","00000000000000000000000000
00000000000000000"
```

You have to make use of RESTORE and READ to get the data for a basic program. Note the structure of line 1006 for a string data type, you have to read two strings here, the first being a dummy value.

And the second file Test_ins is a data file containing the config block itself, which is included in a compiled basic program via the

```
"REMark %%name_ins,1,0"
```

directive in Turbo (requires Turbo compiler v5.02 or later).

At this stage, if you see all this for the first time you might just take fright and decide that even Linux looks simpler than this - it looks a bit like a random set of data and characters at this stage.

Listing of Test_h:

```
/* Configured Items - Config Level 1
*
* Name  Description
* WRDA0  Integer value
* CHRA0  Char type
* CDEA0  Select Yes or No
* STRA0  Default drive
*/

static unsigned short conf1a[] = {
12328,2,16944,4,28672,20085,
15420, 20803, 18008, 15934, 12337, 5, 21605, 29556, 12800, 6,
12590, 12337, 8224,   /* Vers 1.01 */
2560,162,0,0,42,104,512,155,0,0,46,96,1024,147,0,0,
46,86,0,138,0,65456,52,66,65535,13,18798,29797,26469,29216,30305,27765,
25856,9,17256,24946,8308,31088,25856,16,21349,27749,25460,8281,25971,8303,29216,20079,
13,17509,26209,30060,29728,25714,26998,25856,256,0,100,10,0,16,20079,8224,
8224,8224,8224,8224,8224,8224,8224,256,16,22885,29472,8224,8224,8224,8224,8224,8224,
65535,32767,0 };

static unsigned char conf1b[] = {
127,255,0,48,127,255,0,0,0,2,0,43,0,5,70,76,
80,49,95,0,0,0,0,0,0,0,0,0,0,0,0,0,
0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,
0,0,0,0,0,0,0,0,0,0,0 };

static unsigned short *WRDA0 = conf1a+101;
static unsigned char *CHRA0 = conf1b+3;
static unsigned char *CDEA0 = conf1b+7;
static unsigned char *STRA0 = conf1b+14;
```

Now you need to follow the instructions carefully to figure out how to make sense of this in your programs. Believe me, it does make sense and works well, although it's hard to believe when you first see it. I think this is Uconfig's main snag, it manages to make life seem harder than it really is. What it doesn't make clear is how you can test the config block from interpreted basic, since there is no meaningful data in the DATA statements for interpreted basic, although the Turbo system does insert the data at runtime in a compiled program, so you may be tempted to use an IF COMPILED THEN..ELSE to do something different to test an interpreted program. At this stage you begin to think, if you are used to Basconfig, what is wrong with creating a system which tags a few basic extensions onto a config block which read the data from it. Such a system is simply LRESPRed for use from interpreted basic or included in a compiled program, so it works equally well from interpreted or compiled basic.

I struggled with this when I was writing my Xwords program some time ago. I found that I couldn't make sense of anything when it was running as an interpreted program, so I ended up with a fairly complex set of commands to make the program work differently for interpreted and compiled environments. Here's a simple example of reading the string data in line 1006 of the example above

```
100 IF NOT COMPILED THEN
110 def_drive$ = "FLP1_" : REM hard coded
    interpreted defaults
120 ELSE
130 REMark use config block DATA statements
140 RESTORE 1006
150 READ dummy$ : READ def_drive$
160 END IF
```

Verdict: An excellent, user friendly system for creating a configuration block for basic, assembler and C. Does not support all data types (e.g. byte, long word, or select). Supports level 1 and

level 2. Takes some getting used to for use with Turbo basic programs, especially if you are used to Basconfig. Unlike Basconfig and Q-Config, it can alter existing config blocks it created earlier. The system of choice for Turbo users, but cannot be used with other basic compilers. Needs Turbo 5.02 or later.

Which program would I use for what application?

1. If I am using Qliberator, I can't use Uconfig. It's Turbo specific.
2. Creating level 2 blocks - I must use Q-Config for Qliberator, or Uconfig for Turbo (I haven't tested if a Q-Config block would work under Turbo, although I see no reason why it wouldn't).
3. If I wish to be able to alter a config block's structure later on, I have to use FileCfg or U-Config.
4. If I want to create a config block for assembler, I'd have to use Q-Config or U-Config.
5. If I want to create a config block for C68, I have to use U-Config.

Comparison Table

Here's a little table which compares which data types and facilities are supported by each program. It only compares facilities from a Basic user's point of view

Facility	Basconfig	Q-Config	FileCfg	U-Config
String type	Yes	Yes	Yes	Yes
Byte type	Yes	Yes	Yes	No
Word type	Yes	Yes	Yes	Yes
Long Word type	Some versions	Yes	Yes	No
Code type	Yes	Yes	Yes	Yes
Char type	Yes	Yes	Yes	Yes
Select type	No	Yes	No	No
Name keyword	Some versions	Yes	Yes *	No
Version keyword	Some versions	Yes	Yes *	No
Level 1	Yes	Yes	Yes	Yes
Level 2	No	Yes	No	Yes
Assembler output	No	Yes	No	Yes
Basic output	Yes	Yes	Yes	Yes
C output	No	No	No	Yes
Alterable	No	No	Yes	Yes

* = Subject to version of Basconfig extensions used.

Config For C

There is another useful little snippet for C68 users that I found on Dilwyn Jones's website. It is a small example package from Jonathan Hudson showing how to approach Config blocks for C68. Now I know less about C than I do about my own dinner, so I'll mention it here without comment. It's a small zip file with a few example files. Just download the file cfg.zip from the Config section of his website:

http://www.dilwyn.uk6.net/config/index.html

Fun with Fonts – Part 2

by Dilwyn Jones

Editing Fonts

There are a number of freely available font editor utility programs available on websites, PD libraries and other sources of free software. Some graphical and DTP programs also include utilities to edit QL fonts, such as the programs supplied with the various versions of Page Designer. It is also quite easy to write your own with the right information.

To create a font, we need to decide on the number of characters, which character codes to include, and allow 2 extra bytes for the header information.

A standard QL character set 1 includes definitions for character codes 31 to 127, which is 97 characters in all. A standard QL character set 2 includes definitions for character codes 127 to 191, which is 65 characters in all. The first 2 bytes of a font consist of:

```
lowest valid character code
number of characters-1
```

Each character consists of 9 bytes, so the font file will be 2 + 9*number of characters long.

So, as we have decided that our new font will as QL font 1, from 31 to 127 inclusive, we can calculate how much space we need as 2+(97*9) or 875 bytes, then initialise it as follows:

```
base1 = ALCHP(875) : REMark space for QL font 1
POKE base1,31 : REMark lowest valid character
POKE base1+1,96 : REMark number of characters - 1
```

We can work out where each character is with a simple calculation as follows:

```
char_start=base1+2+9*(character_code-lowest_valid_character_code)
```

Setting up a font is done with code like the Setup_Font procedure in the example listing below.

Now, to define each character, all we need is a simple little procedure as follows, called Define_Character, which lets us enter the pixel pattern or mask for each character as a series of 9 binary numbers:

```
1000 DEFine PROCedure Setup_Font
1010   CLS : CLS #0
1020   INPUT #0,'Lowest character › ';lowest_code
1030   INPUT #0,'Highest character › ';highest_code
1040   characters = highest_code - lowest_code + 1
1050   REMark space required
1060   base1 = ALCHP(2+(9*characters))
1070   REMark header
1080   POKE base1,lowest_code
1090   POKE base1+1,characters-1
1100 END DEFine
1110 :
1120 DEFine PROCedure Define_Character
1130   INPUT #0,'Character code › ';char_code
1140   CLS : PRINT 'Enter 9 binary values below:'
1150   DIM binary$(8,8)
1160   FOR a = 0 TO 8
1170     INPUT 'Line ';a+1;':';binary$(a)
1180     POKE base1+2+9*(char_code-lowest_code)+a,BIN(binary$(a))
1190   END FOR a
1200 END DEFine Define_Character
```

Figure 2 shows how it looks when entering characters. My example shows me redefining CHR$(33) as a square box – the number 1s indicate a set (ink) pixel, while a number 0 indicates an unset (paper) colour pixel.

You can see the result of defining a character by using a few lines of Basic as follows:

```
CHAR_USE #1,base1,0
PRINT CHR$(33)
```

Remember to reset channel 1 font afterwards with CHAR_USE #1,0,0 as the rest of the font is blank! Also, remember to release the memory with RECHP base1 after you have finished using it.

```
Enter 9 binary values below:
Line 1:01111100
Line 2:01000100
Line 3:01000100
Line 4:01000100
Line 5:01000100
Line 6:01000100
Line 7:01000100
Line 8:01000100
Line 9:01111100
```

Figure 2 - redefining chr$(33) as a box

Redefining a character set like this is useful in terms of creating new fonts for your QL, and it can also be useful as user defined graphics in games you have written yourself. Once a font has been defined, your program can either load and install it as a font file, or another approach would be to copy all the byte values of the font into DATA statements to be carried within the program, so the program doesn't have to know where the font file is. A program like the one below can convert a font into DATA statements to merge with your Basic program:

```
100 INPUT #0,'Font file name › ';ip$
110 INPUT #0,'First DATA line number › ';line_no
120 INPUT #0,'Save as (filename) › ';op$
130 OPEN_IN #3,ip$ : OPEN_NEW #4,op$
140 REMark lowest character code and number of characters-1
150 PRINT #4,line_no;' DATA ';CODE(INKEY$(#3));',';CODE(INKEY$(#3))
160 items = 0 : REMark count 9 items per line
170 line_no = line_no + 10
180 FOR a = 3 TO FLEN(#3)
190   byte = CODE(INKEY$(#3))
200   IF items = 0 THEN lne$ = line_no&' DATA '
210   lne$ = lne$&byte
220   REMark maximum of 9 bytes of data (one character
230   REMark definition) per line
240   items = items+1
250   IF items ‹ 9 THEN
260     lne$ = lne$&',' : REMark comma between numbers
270   ELSE
280     REMark send line (1 character definition) to file
290     PRINT #4,lne$
300     items = 0 : line_no = line_no+10
310   END IF
320 END FOR a
330 CLOSE #3 : CLOSE #4
```

What this does is create a set of data statements as a small program you can merge with your main program. It asks you for the filename of the font to be converted, then the line number of the first DATA statement to be generated then the filename to be used to save the little Basic program.

The program generated has as its first line the values of the 2 byte header for the font. Then, each line has 9 bytes for the definition values of each line in the character, laid out so that the definition for each character is stored on one line.

Your program would install this as a font with code like the following:

```
100 RESTORE
110 READ lowest : READ chars
120 base1 = ALCHP(2+(9*(chars+1)))
130 POKE base1,lowest : POKE base1+1,chars
140 offset = 2
150 REPeat loop
160   IF EOF : EXIT loop
170   READ byte
180   POKE base1+offset,byte
190   offset = offset+1
200 END REPeat loop
210 CHAR_USE base1
```

Using new fonts like this can be great fun, but that's not all we can do to have fun with fonts!

Shadow Printing

We can create a simple shadow effect by printing text over itself twice, slightly offset, in a different colour. Figure 3 shows a sample of text using the routine below.

```
100 REMark Shadowed text
110 CSIZE 3,1 : PAPER 7 : CLS
120 INK 0 : CURSOR 52,51 : PRINT 'Shadow Text'
130 OVER 1
140 INK 2 : CURSOR 50,50 : PRINT 'Shadow Text'
150 OVER 0
```

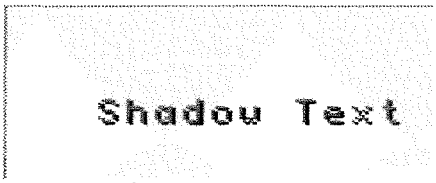


Figure 3 - Shadowed text

This effect works best in larger character sizes, but will work to some degree in all character sizes. The basic principle is to print the shadow first in one colour, then use OVER 1 to overprint the text with a second copy of itself in another colour, the OVER 1 ensuring it doesn't erase the first one. CURSOR is used for precise positioning of the string to be printed. The shadow should be offset by one or two pixels horizontally and vertically from the main text - the direction of offset being chosen to allow the shadow to be above or below, or to the left or right of the text. An offset of 2 pixels horizontally is needed in MODE 8 since there's only half the number of pixels across. In other modes, altering the CURSOR statement in line 120 to CURSOR 51,51 (1 pixel horizontal offset) may produce a better effect. Experiment with character size, colours used and amounts of offset to see what achieves the best effects.

Outline Text

Taking this a step further, we can use multiple offsets to get a character which has a border around its outline. In this case, we have to overprint the characters to the left, right, above and below the actual text. Figure 4 shows the effect - my example is text printed in green, with a black outline around each character on a white background.

Here is the short program I used to achieve this effect:

```
100 REMark Outlined text
110 CSIZE 3,1 : PAPER 7 : CLS : INK 0 : OVER 1
120 FOR y = 0,1,2
130   FOR x = 0,1,2
140     CURSOR 50+x,50+y : PRINT 'Outline Text'
150   END FOR x
160 END FOR y
170 CURSOR 50+1,50+1 : INK 4 : PRINT 'Outline Text'
180 OVER 0
```

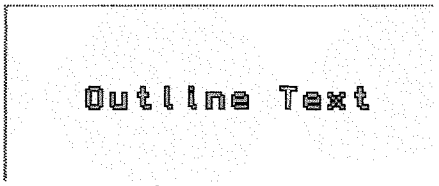


Figure 4 - Outlined text

Because the characters produced are a good deal wider than the standard text because of the outline, this effect works best in CSIZE 1 and 3 widths because of the extra spacing, although it will work reasonably well in all character sizes.

Enlarged Text

The standard CSIZE command only lets us do normal or double width in one of two spacings, plus normal and double height. Here is a routine which lets us display text in a wide range of widths and heights, up to the size of a window. Figure 5 shows a small selection of sizes.

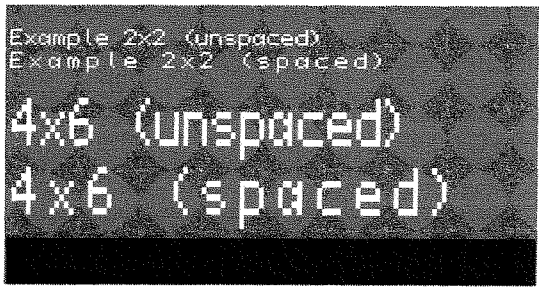


Figure 5 - Sample output of enlarged text routine

Here is the enlarger program:

```
100 REMark Enlarger
110 WINDOW 448,202,32,12 : PAPER 2 : BORDER 1,255 : CLS
120 Enlarge #1,2,2,0,0,20,7,2,'Example 2x2 (unspaced)'
130 Enlarge #1,2,2,1,0,40,7,2,'Example 2x2 (spaced)'
140 Enlarge #1,4,6,0,0,80,7,2,'4x6 (unspaced)'
150 Enlarge #1,4,6,1,0,140,7,2,'4x6 (spaced)'
160 STOP
170 :
180 DEFine PROCedure Enlarge (channel, wide, high, spaced, x, y, ink_colour,
paper_colour, str$)
190   LOCal base1,base2,cde1,cde2,nc1,nc2,char,byte
200   base1 = CHAN_L(#channel,42): REMark address of first font
210   base2 = CHAN_L(#channel,46): REMark address of second font
220   cde1  = PEEK(base1)        : REMark lowest valid character 1st font
230   cde2  = PEEK(base2)        : REMark lowest valid character 2nd font
240   nc1   = PEEK(base1+1)      : REMark number of characters-1 1st font
250   nc2   = PEEK(base2+1)      : REMark number of characters-1 2nd font
260   FOR char = 1 TO LEN(str$)
270     cde = CODE(str$(char))
280     SELect ON cde
290       =cde1 TO cde1+nc1: addr = base1+2+(9*(cde-cde1)): REMark font 1
300       =cde2 TO cde2+nc2: addr = base2+2+(9*(cde-cde2)): REMark font 2
310       =REMAINDER       : addr = base2+2 : REMark default character
320     END SELect
330     FOR byte = 0 TO 8
340       row_value = PEEK(addr+byte)
350       across = x + ((6+spaced+spaced) * wide * (char-1))
360       IF spaced = 0 THEN
370         REMark ordinary fonts (bits 7 to 2)
380         FOR bit = 128,64,32,16,8,4     : Plot_Pixel
390       ELSE
400         REMark fonts spaced more widely bits 7 to 0, e.g. "fat" fonts
410         FOR bit = 128,64,32,16,8,4,2,1 : Plot_Pixel
420       END IF
430     END FOR byte
440   END FOR char
450 END DEFine Enlarge
460 :
470 DEFine PROCedure Plot_Pixel
480   IF row_value && bit THEN
490     REMark INK pixels
500     BLOCK #channel,wide,high,across,y+(byte*high),ink_colour
510   ELSE
520     over_state% = CHAN_B%(#channel,66) && 12 : REMark OVER details
530     IF (over_state% && 4) = 0 THEN
540       REMark only plot PAPER pixels if OVER 0
550       OVER #channel,0 : REMark cancel OVER temporarily
560       BLOCK #channel,wide,high,across,y+byte*high,paper_colour : REMark paper
570       REMark restore OVER state for this channel
```

```
580       SELect ON over_state% : =4 : OVER #channel,1 : =8 : OVER #channel,-1
590     END IF
600   END IF
610   across = across + wide
620 END DEFine Plot_Pixel
```

This is a pretty complex program, so here are some notes on how the program works.

The main procedure is the one called Enlarge, at line 180. This has a number of parameters, which must be supplied as follows:

channel	screen channel number to which the enlarged text is printed
wide	how many times wider than CSIZE 0,0 to print the text
high	how many times taller than CSIZE 0,0 to print the text
spaced	0=print standard width characters 1=print wider spaced characters (like CSIZE 1,0 or 3,0)
x,y	origin of top left of the text printed. Uses the same co-ordinates as the CURSOR command.
ink_colour	foreground (ink) colour for the text
paper_colour	background (paper) colour for the text
str$	the text string to be printed

Lines 200 and 210 locate the fonts by reading their addresses from the channel definition block for the channel being used. base1 is the address of the first font, while base2 is the address of the second font. The next 4 lines extract the character code range information from the first two bytes of both fonts. Then the FOR loop in line 260 steps along the characters to be printed, one by one. Line 270 gets the code of the character to be printed and lines 280 to 320 work out which font to use for that character. If the character is not in either font, line 310 ensures that the default lowest character of the second font is used, just as the operating system would do.

The "FOR byte" loop in line 330 steps down the character, row by row. Line 340 uses a PEEK statement to read a byte holding the dot patterns for each row of the character. It works dot by dot across each character and the variable "across" works out where the top left corner of the rectangle used to plot each dot or pixel of the character lies.

Lines 360 to 420 use a FOR loop list of values to work out whether to plot 6 or 8 dots across per character, depending on whether you set the value of "spaced" to 0 or 1. If 0 (unspaced) it plots just the leftmost 6 bits of the character's dot pattern. If 1 (spaced more widely) it plots all 8 pixels, rather like printing in CSIZE 1,0. This routine, though, can print all sizes like this, so that wide or "fat" fonts can be used in all character sizes as long as we tell it to use the wider spacing.

The Plot_Pixel routine draws the individual pixels of the character by using the BLOCK command to draw a pixel as a block in the required width and height (wide x high). BLOCK uses the OVER state, so we can use this routine with an OVER command if we wish to.

Line 520 checks if OVER 0 has been set – if it has, the paper colour is used for the background. If not, the paper pixels (those which are 0 in the dot pattern) are not painted in.

The byte holding these character attributes in the channel definition block (offset hex 42, or decimal 66) holds the OVER state in bits 2 (transparent or not) and 3 (XOR ink colour or not). Line 520 has to mask bits 2 and 3 by doing a bitwise AND with the value 12 (4+8) to simplify checking these 2 bits when restoring the OVER state in line 580. Note how line 550 temporarily sets OVER 0 to ensure that the paper colour pixels do not get XOR'ed with the background if OVER –1 happens to have been set beforehand. Bit 2 being set signifies transparent background (which could be OVER 1 or OVER –1) and bit 3 signifies XOR characters (OVER –1).

...more fun in part 3!

3D Rally Racing

by Stephen Poole

This 3D racer_bas program was written to show the sort of things that can be done with 3D perspective animation methods. I wanted a program that would work fast on any QL system, including an original unexpanded JS ROM.

To do this I first had to design a race-track, then load all the circuit x & y edge coordinates into an array list. Then as I advanced down the list, I took the perspective view-point from above the first pair of edge-coordinates in the list. The camera's target-point came from above the third pair of coordinates, and then calculated the intervening 'Screen' parameters from them. Next I calculated the perspective view of the following ten edges in the list, which I saved in a second array for each frame. Finally, by advancing from item to item through the first array, the second array was filled with a screen-full of perspective edge points.

The game itself consists of drawing each 20 edge-line 'frame' and a key-driven circle on the screen which you must steer to keep it on course, (The perspective view of the track is off-set, as if you were remotely controlling the car from a helicopter overhead and to the left). But as you can see ten segments ahead, you have time to anticipate your steering. The up or down arrow-keys let you accelerate or brake as you go, but if you go too far off-track you lose all your speed again. At the beginning of the game you are asked how many laps you want, and at the end you are given your average lap-speed, so you can judge your progress.

The listing could be shortened by DLINEing the ATAN_ function for SMSQ/E, but this optimisation would only be an advantage if the perspective was calculated directly as in professional games. I wanted a game in Basic so that readers could examine the code and see how easy animation can be. (It may at first sight appear to be complex, but is in fact involves just a few notions). The program took me about three wet (holi)days to write, as data entry took a long time and simulating car driving was not familiar to me.
As always, program output appears rudimentary as the replay contains scant detail. This, as always, is a compromise: I have to keep data to a minimum to avoid readers having to type in long boring lists of data elements! For five times more detail and a much smoother animation you would have to type in 3700 data items! But design and enter your own circuits if you wish...I had to guess mine, having no ruled paper to guide me...sorry! But the circuit is OK for rally driving!

For an automatic demonstration, reply (y)es to demo? input the number of laps you want, then accelerate or brake as you drive. Let bp=0 if you want no audible engine noise to help you estimate your speed. But remember to brake as hair-pin bends approach, and accelerate out of them to improve your lap-speed. Before you can become a champion, you are advised to complete at least one lap without skidding off track! On slower machines (than my 2.8Ghz PC), reduce the 'pse' pause value. Readers are welcome to experiment with any of my printed code. (My only condition is that code must not be used for any commercial purposes). If you enjoy tinkering, why not transform this program to simulate a roller-coaster by including altitude details?
It would only require slight modifications...

Whatever you do, remember: Marcel Kilgus enabled us to envisage programming major QL projects via QPC, and this throughout the foreseeable future. If you have any programming ideas, go ahead and write them as there is no reason why the QL scene should fold up now....In fact quite the opposite is true: Indeed, try to convert your PC friends to writing programs using QPC. They will be amazed at the computing power they potentially have! Personally, I will go on writing programs suitable for readers with unexpanded QL's until I run out of ideas. (But I may start writing QPC-specific code soon to take full advantage of QPC functionality. I am sure I am missing something...)

Finally, after beta-testing, Bruno got me to modify the keying so the game could be played using a joy-stick. Job done!

Happy Swerving, Steve Poole.

```
100 ::
110 REMark Racer_bas. by S.Poole. v2sept07
120  REMark for QL Today. Beta-test by B.Coativy.
130 :
140 CLEAR: RESTORE : OPEN#1,con_16
150  WINDOW 512,256,0,0: PAPER 0: INK 7: CLS: SCALE 33,0,0: OVER 0
160  :
170  REMark num=data items. fr=edges per frame. zz=height.
180   num=73: fr=10: DIM t(num+1,4),g(num+1,fr+1,4): zz=.4
190    r90=RAD(90): r180=PI: r270=RAD(270): r360=PI*2: PI2=PI*2
200     left=192: right=200: up=208: down=216: ESC=27
210      REMark rd=radius. ps=pause. fc=off-edge factor. bp=beep.
220       rd='.01': ps_max=35: ps=ps_max: nf=num-fr: fc='1.15'
230        REMark Let these be on or off as required:
240         bp=1: demo=0: pse=5: zoom=3: ct=0
250          PRINT 'Demo? (y/n)': i$=INKEY$(#1,-1): IF i$=='y': demo=1: ps=5
260          IF demo=1: offset=0: ELSE offset='.5'
270  :
280 REMark Get edges & draw circuit:
290 FOR f=0 TO num+1
300     READ j,t(f,1),t(f,2),t(f,3),t(f,4)
310     LINE t(f,1),t(f,2) TO t(f,3),t(f,4)
320     IF f=0: CIRCLE t(f,1),t(f,2),.25; t(f,3),t(f,4),.25
330 END FOR f
340 REMark SCY is used implicitly by VIEW_. Do not alter it:
350 scy=.38: SCALE scy,-scy/1.5,-scy/2
360 :
370 REMark Get circuit:
380 FOR f=0 TO nf
390     REMark Get several frames ahead:
400     FOR q=1 TO fr
410         k=f+q: REMark Get centers of Circuit edges:
420         IF q=1 THEN
430            REMark Get perspective viewing point:
440             x3=t(k-1,1): y3=t(k-1,2): x4=t(k-1,3): Y4=t(k-1,4)
450            REMark Get perspective target-point:
460             x5=t(k+1,1): y5=t(k+1,2): x6=t(k+1,3): y6=t(k+1,4)
470            REMark define view-point parameters:
480             tx=(x3+x4)/2: ty=(y3+Y4)/2: tz=zz: REMark eye-point.
490             cx=(x5+x6)/2: cy=(y5+y6)/2: cz=zz: REMark target-point.
500            REMark dis-axe the viewing line:
510             tx=tx-offset: cx=cx-offset
520            REMark Consider eye to target triangle:
530             Fx=cx-tx: fy=cy-ty: fz=cz-tz: fh=((Fx^2)+(fy^2))^.5
540            REMark Eye to target polar orientations:
550             c=ATAN_(fy,Fx): IF c>PI: c=c-PI2: END IF : IF c<-PI: c=c+PI2
560             b=ATAN_(fz,fh): IF b>PI: b=b-PI2: END IF : IF b<-PI: b=b+PI2
570         END IF
580         REMark Get perspective screen coordinates:
590         x1=t(k,1): y1=t(k,2): x2=t(k,3): y2=t(k,4)
600         ok=VIEW_(x1,y1,0): g(f,q,1)=m/zoom: g(f,q,2)=n
610         ok=VIEW_(x2,y2,0): g(f,q,3)=m/zoom: g(f,q,4)=n
620     END FOR q
630 END FOR f
640 ky=(g(1,2,2)+g(1,3,2)+g(1,2,4)+g(1,3,4))/4
650 :
660 REMark Rush around the rally track:
670 REPeat loop
680    AT 2,0: INPUT'Laps?'!i$: i$='0'&i$
690    IF i$<1: NEXT loop: ELSE lap=i$: i$=INKEY$(#1,99)
```

```
700    ct=0: d1=DATE: IF NOT demo: kx='-.15'
710    FOR laps=1 TO lap
720        FOR f=1 TO nf-1
730            CLS: AT 4,0: PRINT 'Laps:'!laps
740            REMark Get ball parameters:
750             IF demo: kx=0
760             AT 6,1: PRINT'off:'!ct
770             CIRCLE kx,ky,rd
780            REMark Get off-edge limits:
790             lx1=g(f,2,3): lx2=g(f,3,3): Rx1=g(f,2,1): rx2=g(f,3,1)
800             lx=lx1*fc: IF lx2<lx1: lx=lx2*fc
810             Rx=rx2*fc: IF Rx1>rx2: Rx=Rx1*fc
820             :
830             REMark draw and erase frames:
840                 REMark record old screen coordinates:
850                 om1=g(f,1,1): on1=g(f,1,2): om2=g(f,1,3): on2=g(f,1,4)
860                 :
870                 REMark Look several frames ahead:
880                 FOR q=2 TO fr
890                     m1=g(f,q,1): n1=g(f,q,2): m2=g(f,q,3): n2=g(f,q,4)
900                     REMark link edge-points:
910                     LINE om1,on1 TO m1,n1, om2,on2 TO m2,n2
920                     om1=m1: on1=n1: om2=m2: on2=n2
930                 END FOR q: get_key
940        END FOR f
950    END FOR laps
960    AT 1,0: PRINT'Time per lap:'!(DATE-d1)/laps!'seconds'
970    AT 2,0: PRINT'Another? (y/n)': i$=INKEY$(#1,-1): IF i$=='n': STOP
980    IF i$=='y': CLS: ELSE GO TO 970
990 END REPeat loop
1000 :
1010 DEFine PROCedure get_key
1020  i1$=INKEY$(#1,ps): key=CODE(i1$)
1030  SELect key
1040     =ESC  : STOP
1050             REMark Keep ball on screen:
1060     =left : IF kx>'-.32': kx=kx-'.02'
1070     =right: IF kx<'+.40': kx=kx+'.02'
1080     =up   : ps=ps+pse: IF ps>ps_max: ps=ps_max
1090     =down : ps=ps-pse: IF ps<pse : ps=pse
1100  END SELect
1110  IF kx<lx OR kx>Rx THEN
1120     BEEP 32766,255: ct=ct+1: ps=ps_max
1130     ELSE IF bp: BEEP 32766,ps+40,80,164,1,1,7
1140  END IF
1150 END DEFine
1160 :
1170 DEFine FuNction VIEW_(vx,vy,vz)
1180  REMark (Append underscore or else crash the name_table).
1190  REMark Consider (eye to target) & (eye to viewed-point) triangle:
1200   lx=vx-tx: ly=vy-ty: lz=vz-tz: lh=((lx^2)+(ly^2))^.5: REMark GET hypoteneuse.
1210  REMark For QDOS, keep orientation angles in simple circle:
1220   h=ATAN_(ly,lx)-c: IF h>PI: h=h-PI2: END IF : IF h<-PI: h=h+PI2
1230   e=ATAN_(lz,lh)-b: IF e>PI: e=e-PI2: END IF : IF e<-PI: e=e+PI2
1240  REMark Perspective screen coordinates:
1250   m=TAN(h): n=-TAN(e)*((m^2)+1)^.5: RETurn 1
1260 END DEFine VIEW_
1270 :
1280 DEFine FuNction ATAN_(oo,aa)
1290  REMark For QDOS, gets ATAN right in all quarters:
```

```
1300  REMark Sign(opposite side) & Sign(adjacent):
1310  so=(oo›0)-(oo‹0): sa=(aa›0)-(aa‹0)
1320  IF so=0 OR so=1: IF sa=0: RETurn 0
1330  IF so=0 : IF sa=1 : RETurn r90
1340  IF so=-1: IF sa=0 : RETurn r180
1350  IF so=0 : IF sa=-1: RETurn r270
1360  oa=ATAN(aa/oo): REMark hypoteneuse angle in RADs.
1370  IF so=1 : IF sa=1 : RETurn oa
1380  IF so=-1: IF sa=1 OR sa=-1: RETurn r180+oa
1390  IF so=1 : IF sa=-1: RETurn r360+oa
1400 END DEFine ATAN_
1410 :
1420 REMark Numbered left & right edge x & y coordinates:
1430 DATA 0, 17, 8.5,   18, 8.3
1440 DATA 1, 16.8, 7.6, 17.8, 7.4,        2, 16.7, 6.5, 17.6, 6.4
1450 DATA 3, 16.5, 5.5, 17.5, 5.3,        4, 16.3, 4.5, 17.4, 4.2
1460 DATA 5, 15.2, 4, 16.6, 2.7,            6, 14.4, 3.5, 14.4, 2.6
1470 DATA 7, 12.9, 3.6, 12.7, 2.7,        8, 11.5, 3.8, 11.4, 3
1480 DATA 9, 10, 4.2, 9.6, 3.1,          10, 8.5, 4.3, 8.4, 3.3
1490 DATA 11, 7, 4.5, 6.9, 3.5,          12, 5.7, 4.7, 5.5, 3.7
1500 DATA 13, 5.3, 5, 3.5, 4.3,          14, 5, 6, 3, 5.4
1510 DATA 15, 5.3, 6.7, 3, 7,            16, 5.7, 7.3, 3.5, 8.7
1520 DATA 17, 6.4, 7.5, 6.3, 9,          18, 8, 7.4, 8, 8.8
1530 DATA 19,9.6, 7.4, 9.4, 9,           20, 12, 7.7, 10.7, 9.4
1540 DATA 21, 13.5, 8.7, 11.9, 10.2,     22, 14.6, 10.2, 13, 11
1550 DATA 23, 15.3, 11.3, 13.8, 11.8,    24, 15.5, 12.7, 14, 12.7
1560 DATA 25, 15.5, 14, 14, 14,          26, 14.7, 16, 13.4, 15.3
1570 DATA 27, 12.8, 17.7, 12.3, 16.7,    28, 10.7, 18.4, 10.3, 17.2
1580 DATA 29, 8.7, 18.8, 8.3, 17.3,      30, 7.3, 19.4, 6.5, 18
1590 DATA 31, 6.2, 20.5, 5, 19.3,        32, 5.4, 21.6, 4, 20.7
1600 DATA 33, 4.9, 23.2, 3.3, 22.4,      34, 4.7, 24.5, 3, 24.3
1610 DATA 35, 4.7, 25.7, 3.3, 26.3,      36, 5.5, 27.5, 3.9, 28.4
1620 DATA 37, 6.2, 27.6, 5.8, 29.8,      38, 6.9, 27.6, 8.2, 29.5
1630 DATA 39, 7.2, 27.1, 8.6, 27.2,      40, 6.7, 25.3, 8.1, 25.2
1640 DATA 41, 6.6, 23.5, 7.7, 23.6,      42, 7.3, 21.7, 8.2, 22.5
1650 DATA 43, 8.5, 20.3, 9.3, 21.5,      44, 10.1, 19.8, 10.5, 21.3
1660 DATA 45, 12.3, 20, 12, 21.6,        46, 13.9, 21.1, 13, 22.3
1670 DATA 47, 15.4, 22.3, 14.6, 23.3,    48, 16.6, 23.3, 15.7, 24.4
1680 DATA 49, 17.6, 23.4, 17.2, 25.3,    50, 18, 23.4, 19, 25.5
1690 DATA 51, 18.1, 22.8, 20, 23.3,      52, 18.4, 21.5, 19.6, 21.3
1700 DATA 53, 18.3, 20.3, 19.3, 20,      54, 18.2, 18.7, 19.3, 18.7
1710 DATA 55, 17.8, 17.6, 19, 17.3,      56, 17.7, 16.3, 18.7, 15.9
1720 DATA 57, 17.5, 14.7, 18.6, 14.4,    58, 17.4, 13.4, 18.3, 13.1
1730 DATA 59, 17.2, 11.9, 18.2, 11.6,    60, 17, 10.6, 17.9, 10.3
1740 DATA 61, 16.9, 9.6, 17.9, 9.3,      62, 17, 8.5, 18, 8.3
1750 :
1760 REMark For repeated look-ahead frames:
1770 DATA 63, 16.8, 7.6, 17.8, 7.4
1780 DATA 64, 16.7, 6.5, 17.6, 6.4,      65, 16.5, 5.5, 17.5, 5.3
1790 DATA 66, 16.3, 4.5, 17.4, 4.2,      67, 15.2, 4, 16.6, 2.7
1800 DATA 68, 14.4, 3.5, 14.4, 2.6,      69, 12.9, 3.6, 12.7, 2.7
1810 DATA 70, 11.5, 3.8, 11.4, 3,        71, 10, 4.2, 9.6, 3.1
1820 DATA 72, 8.5, 4.3, 8.4, 3.3,        73, 7, 4.5, 6.9, 3.5
1830 DATA 74, 5.7, 4.7, 5.5, 3.7
1840 ::
```

Programming in Assembler - Part 23
WMAN, The Journey Continues

by Norman Dunbar

Introduction

At the end of the previous article I promised that we would continue our look at the standard window definition from where we left off. In this article that is exactly what we shall be doing as we take a look into the lists of objects that hang off of our window. I'm referring to the information sub-windows, loose items and applications sub-window lists. In addition, we have also to consider the various objects that are used within these lists.

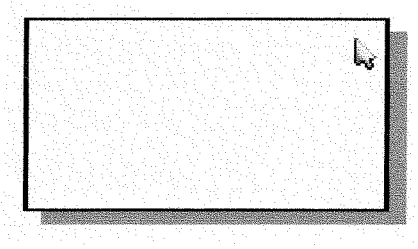
WMAN Standard Windows Definition – Continued

At the end of the previous article, we had reached the following definition for our example window:

```
; Main window definition.
            dc.w  160                   ; Default window width
            dc.w  84                    ; Height
            dc.w  146                   ; Initial pointer x position
            dc.w  8                     ; Y position
            dc.b  $00                   ; MSbit clear to call CLS
            dc.b  2                     ; Shadow depth
            dc.w  1                     ; Border width
            dc.w  0                     ; Border colour (black)
            dc.w  7                     ; Paper colour (white)
            dc.w  0                     ; Use default pointer

; Loose item attributes.
            dc.w  1                     ; Current item border width
            dc.w  0                     ; Border colour (black)

; Loose item unavailable.
            dc.w  30                    ; Paper colour (green/white stipple)
            dc.w  30                    ; Ink colour
            dc.w  0                     ; Pointer to blob for pattern
            dc.w  0                     ; Pointer to pattern for blob

; Loose item available.
            dc.w  7                     ; Paper colour (white)
            dc.w  0                     ; Ink colour (black)
            dc.w  0                     ; Pointer to blob for pattern
            dc.w  0                     ; Pointer to pattern for blob

; Loose item selected.
            dc.w  4                     ; Paper colour (green)
            dc.w  0                     ; Ink colour (black)
            dc.w  0                     ; Pointer to blob for pattern
            dc.w  0                     ; Pointer to pattern for blob

; Help window, if used.
            dc.w  0                     ; Pointer to help window

; Repeated part of window definition - from largest to smallest layout.
            dc.w  160                   ; Width for this layout
            dc.w  84                    ; Height for this layout

; Pointers to definition lists for this layout.
            dc.w  infoList-*            ; Info sub-windows
            dc.w  loosList-*            ; Loose items
            dc.w  appList-*             ; App sub-windows

            dc.w  -1                    ; End of layouts
```

In this article, we will be concentrating on the final part of the above.

Before we move on, a little light relief. If I replace the pointers to the three lists in the final part of the layout definition above, with zero – to indicate that I have no loose items, information sub-windows or application sub-windows – and then run the resulting code, the following screenshot shows what I get.



Screen showing our first window in action.

You can see that so far, all we have defined is a small white window, with a shadow and a black border. The pointer we are using is the default arrow and it is positioned close to the top at the far right of the window. At least it works!

> **Note:**
> **You will not be able to assemble the code I have given you so far. There is a lot more coding to do before you get to that stage. I have a test harness wrapped around my window definition to make things easier for me to explain as I go along.**

Information Sub-Window List

Most PE programs that I have ever seen have a caption bar across the top, possibly with a few loose items such as sleep (ZZz), Move and so on. The caption bar is usually – but not always – green and white stripes with the program name displayed in the middle on a white background. There are surprisingly, very few programs that do not stick to this colour scheme, however, the new graphics drivers are changing this and we are starting to get multicoloured programs with trendy new 3D effects.

That sort of thing can wait until we get to grips with the basics, and so, in the age old tradition of green and white stripes, we shall continue! In addition, the fancy effects are only for those of us running SMSQ and so on, they are not available to the 128KB Standard Black Box QL users.

The usual method of getting the green and white caption bar is to define an information sub-window that covers the required length of the window and position it at the top of the window layout we are defining. The white background for the program name is simply a second information sub-window positioned over the first one. Finally, the title of the program itself is a text object that the second (plain white) information sub-window is linked to.

To be accurate, the program title is a text string embedded within a text object linked to the second information sub-window. All will become clear below.

The process could almost be likened to the following SuperBasic code.

```
1000 REMark Main Window
1010 OPEN #3,con_
1020 WINDOW #3,160,84,50,32
1030 PAPER #3,7
1040 BORDER #3,1,0
1050 CLS #3
1060 :
1070 REMark Caption Bar background
1080 :
```

```
1090 WINDOW #3,98,14,50+30,32+0+1
1100 PAPER #3,85
1110 CLS #3
1120 :
1130 REMark Caption Bar White Bit
1140 :
1150 WINDOW #3,52,10,50+54,32+3+1
1160 PAPER #3,7
1170 INK #3,0
1180 CLS #3
1190 :
1200 REMark Program title
1210 :
1220 PRINT #3,' SysInfo'
1230 :
1240 CLOSE #3
```

It isn't quite the same as that, but things should hopefully become clear as we progress. For now, the definitions of the information sub-windows is shown below and should look strangely familiar.

```
; Information sub-window No. 0
infoList    dc.w  98                  ; Sub-window width
            dc.w  14                  ; Sub-window height
            dc.w  30                  ; Sub-window x origin
            dc.w  0                   ; Sub-window y origin
            dc.b  $00                 ; MSbit clear to clear window
            dc.b  0                   ; Shadow depth
            dc.w  0                   ; Border width
            dc.w  0                   ; Border colour
            dc.w  85                  ; Paper colour (green/white)
            dc.w  0                   ; Pointer to information object list
```

Most of the above you have seen before in the fixed part of the main window definition. As mentioned in the previous article, the shadow depth for sub-windows must be zero. If you are like me, you'll be wondering what happens if you define a shadow on a sub-window. It appears, nothing. I tried putting a shadow of size 1 on an information sub-window and it simply was not drawn. I suspect that internally, WMAN is making as many sanity checks as it can and is probably ignoring the shadow size.

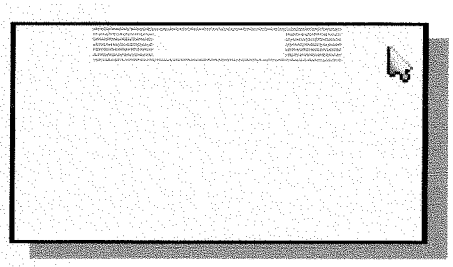
The definition above is equivalent to lines 1070 to 1120 in the SuperBasic code above. That's an awful lot of typing for a simple result!

Next we need to define the second of our information sub-windows, the plain white one used as a background for the title.

```
; Information sub-window No. 1
            dc.w  52                  ; Sub-window width
            dc.w  10                  ; Sub-window height
            dc.w  54                  ; Sub-window x origin
            dc.w  3                   ; Sub-window y origin
            dc.b  $00                 ; MSbit clear to clear window
            dc.b  0                   ; Shadow depth
            dc.w  0                   ; Border width
            dc.w  0                   ; Border colour
            dc.w  7                   ; Paper colour (white)
            dc.w  infoObjs-*          ; Pointer to information object list

            dc.w  -1                  ; End flag
```

As this is our final one, there is a terminating word of -1 at the end of the definition. The one thing to notice in this definition is a pointer to a list of information objects. These are explained next.

Setting the pointer to zero, for a little more fun, and running the resulting program gives us the following window. You can see both of the information sub-windows now, the green and white stripes is the first and the white one is the second. Next we shall look at adding an information object to the second one.



Screen showing our first window with information sub-windows

Information Sub-Window Object List

There are 4 different types of object that you can place within an information sub-window. These are shown in the table below.

Type	Code	Description
Text	-N	This object is text. Character ABS(-N) will be underlined.
Text	0	This object is text. There will be no characters underlined.
Sprite	2	This object is a sprite.
Blob	4	This object is a blob.
Pattern	8	This object is a pattern.

If the type of the object is negative, then a text object is to be used and the character in the string corresponding to the negative number 'positivised' (I think I just made up a new word!) will be underlined. We are not using that here, but when we come to discuss Loose Items, we shall see an example or two.

The following is the definition of our text object for the program title.

```
infoObjs    dc.w  42                  ; Object width
            dc.w  10                  ; Object height
            dc.w  6                   ; X origin
            dc.w  0                   ; Y origin
            dc.b  0                   ; Object type (See table)
            dc.b  0                   ; Spare
            dc.w  0                   ; Text ink colour
            dc.b  0                   ; Text character x size
            dc.b  0                   ; Text character y size
            dc.w  prgTitle-*          ; Pointer to object of correct type

            dc.w  -1                  ; end flag
```

As we only require one object for our information sub-window, there is the usual end of list indicator word of -1 after the definition.

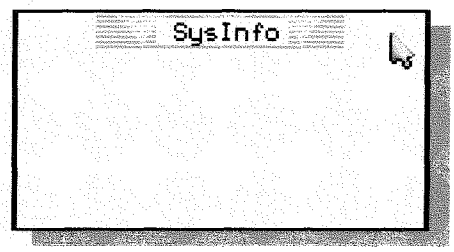
Because this is a text object, we define the ink colour and the character sizes. However, if the object type is non-text (ie a blob, pattern or sprite) then the 'ink' word is used as a word sized relative pointer to the blob, pattern or sprite and the character sizes are ignored. It may be wise to set those to zero just in case.

You will notice that the actual object content is defined elsewhere and one of those word sized relative pointers (or zero!) is used to tell WMAN where the content can be found.

Because our object is a text object, we simply define a QDSOMSQ format string as normal and make sure our pointer above actually points to the string. The definition for our program's title is as follows.

```
; Object No. 2        -> TEXT
prgTitle    dc.w  7
            dc.b  'SysInfo'
```

Now that we have defined all the required information sub-windows and objects that are required for each, assembling my test program and running it gives the following.



Screen showing our first window with an information object

Looks much better than the previous plain white version wouldn't you say? You can see spaces along the caption bar and these will be used - very soon - for a couple of loose items. Read on!

Loose Item List

Loose items are probably the QL's equivalent of Windows Buttons. The following is the definition of a loose item with a text object displayed upon it.

```
;Loose menu item No. 1
            dc.w  24                ; Hit area width
            dc.w  11                ; Height size
            dc.w  132               ; X origin
            dc.w  2                 ; Y origin
            dc.b  0                 ; Object x justification
            dc.b  0                 ; Object y justification
            dc.b  0                 ; Object type
            dc.b  3                 ; Selection keystroke
            dc.w  objESC-*          ; Pointer to object
            dc.w  1                 ; Loose item number
            dc.w  escape-*          ; Pointer to action routine
```

You can see a subtle difference between an information sub-window and a loose item definition. Loose items have the following properties defined.

Property	Description
Hit area width	The width of the loose item. Includes the border defined above in the fixed definition.
Hit area height	The height of the loose item. Includes the border defined above in the fixed definition.
X origin	Where the loose item will be drawn. Relative to the start of the layout.
Y origin	Where the loose item will be drawn. Relative to the start of the layout.
X justification	How the object will be positioned horizontally within the hit area. See below.
Y justification	How the object will be positioned vertically within the hit area. See below.
Object type	Same types and rules as for Information sub-window objects above.
Selection Keystroke	For a letter, the upper case letter. For an event it is the event number minus 14. See below.

Pointer to object	The usual word sized relative pointer to an object of the correct type. Zero if no object.
Loose item number	The loose item number. You get to choose it.
Pointer to action routine	The address of the code to be called when this loose item is HIT or DOne.

As mentioned in the above table, objects are justified within the loose item hit area. This is different from the positioning of objects in information sub-windows. The following table shows the justification settings.

Code	Description
Positive	The object is left or top justified within the hit area.
Zero	The object will be centred within the hit area.
Negative	The object is right or bottom justified within the hit area.

If a key press is required to activate the loose item, it is defined by setting the code of the capital letter to be used.

If, on the other hand, some event is to be used to activate the loose item, then the event number minus 14 is used instead. In our example above, the keystroke is set to 3 for ESC.

If you remember back to chapter 21 when the event record was described, then you may get an inkling of what the event number actually is. It is the bit set in the event vector for the given action. The following shows the events and their details.

Event	Event Name	Event Number	Description Code
DO	16	2	ENTER pressed or right mouse button clicked.
CANCEL	17	3	ESC pressed.
HELP	18	4	F1 pressed.
MOVE	19	5	CTRL+F4 pressed.
RESIZE	20	6	CTRL+F3 pressed.
SLEEP	21	7	CTRL+F1 pressed.
WAKE	22	8	CTRL+F2 pressed.

The action routine is called when the loose item is HIT or DOne. The parameters passed to the action routine will be discussed in a later article.

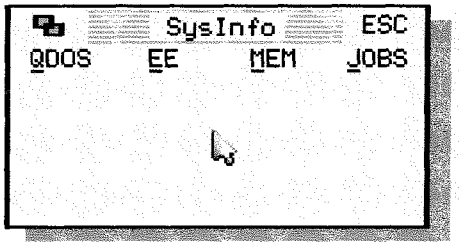
Loose Item Object List

Loose item objects are identical to those for information sub-windows and so, are the same to define. The following is an example of the text object required by our example loose item above.

```
; Object No. 4        -> TEXT
objESC      dc.w  3
            dc.b  'ESC'
```

Nothing at all surprising there, it is a text object after all and as such, we simply define a QDOSMSQ string in the normal manner. Had the object been a blob, pattern or sprite, we would define one of those in the normal manner. More on those objects later on in the series.

Now that we have defined all the required loose items and objects that are required for each, assembling my test program and running it gives the following. I have moved the pointer from its default position in this screenshot so that you can see the contents of all the loose items without obstruction.



Screen showing our first window with an information object

All we need now is an application sub-window for our code to write to and we are ready to add actions etc. I shall keep you in suspense until next time.

Next time, as promised above, we shall continue looking at the remainder of the standard window definition. It seems like there is quite a lot going on, but it will hopefully soon be quite easily understood.

In the next issue we will take a look at adding simple application sub-windows and creating loose item action routines. We might even get a working program to play with, who knows? See you then. ■

The Mouse Organ

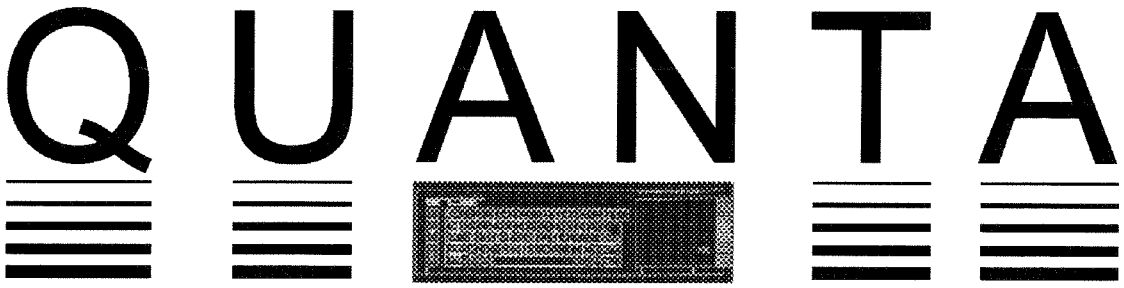
by Simon N. Goodwin

Editor: Simon Goodwin sent us this contribution in reaction to Steve Poole's article "The QL and Binary Music" in the last issue. In his own words the article "overlapped with my own Qdos music research , and distaste for the even tempered scale - annoyingly wrong for most intervals". Although the accompanying programs are written in SuperBasic they were written for Amiga users and cannot be run on a QL. However Simon's article and programs give useful background information and help for readers interested in writing Qdos music programs. We hope that they might stimulate a reader or readers to write QL music related programs (for QL Today?).
Simon Goodwin retains the rights to the article and program.

The Mouse Organ is named after a cruel instrument operated with mallets in a Monty Python sketch, but it sounds a lot more musical. In fact it produces more accurate chords and harmonies than pianos or plain MIDI can manage. It's a stereo mouse-controlled organ. Four simple preset waves allow a choice of timbre, and you can switch the filter on and off as you play. The sounds are necessarily simple, but you could substitute any raw sample in place of the presets. The Mouse Organ has a range of eight octaves – about the same as a grand piano – but the term 'octave' is a misnomer. Music resolves around ratios, rather than absolute frequencies or wavelength periods. Amiga hardware outputs byte values, in the range –128 to +127, read from a table. Levels in this table or 'sample' are output repeatedly by Direct Memory Access, generating sound waves. The time period between outputs determines pitch.

Western music uses scales of eight notes chosen from 13. That set is selected to generate pleasing sequences and harmonies when notes are played at once. If you play the first and eighth notes together, the wave pattern of the higher note repeats three times for two repeats of the lower pitch. These sound good when played together. The ratio is known as a 'perfect fifth' as the eighth note is the fifth from a scale of eight. Other pleasing ratios include 5:4 (a perfect third), 2:1 (an octave), 4:3, and so on. Unfortunately the Western scale does not map exactly onto all the pleasing ratios. It's a compromise, which makes sense if you're trying to cover all the scales with a keyboard a human hand can span, but unnecessarily restrictive for computer music. The Amiga allows more accurate tuning, for better riffs and harmonies.

Since the invention of the piano, notes have been evenly spaced. This 'even tempered scale' gives roughly the right eight ratios wherever you start. If the piano were turned to just one start note it would sound better in that key, but tunes starting with another note would sound out of tune.



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You can improve things by having more subdivisions, like the quarter-tones of Indian and Egyptian music, but the ratios don't fit much better till you step up to 53 notes per octave. That's infeasible for a mechanical keyboard, but no problem for the Amiga's maths or sampling resolution.
Of course you don't play all 53 evenly-spaced notes – just the combinations that give pleasing chords. The Mouse Organ uses an ancient scale, familiar to Blues, early Christian and ancient Greek composers. This 'pentatonic scale' picks five notes per octave, with the interesting property that all combinations give simple ratios and hence pleasant chords. And the 53 steps makes these more accurate than you can get from normal scales without subtle pitch-bending, tricky on pianos!

Usage

The Mouse Organ can be run directly on any Amiga in QL SuperBASIC, by first loading the excellent Amiga Qdos emulator, or Qdos Classic. First you need to expand the Qdos format start-up disk, which loads useful extensions to SuperBASIC, including the RECHP and ALCHP resident procedure and function, to allocate and deallocate memory.
If you've got access to a real QL you'll probably find these in the disk system ROM or part of SuperToolkit 2. They are duplicated in the Amiga Qdos PD_Toolkit, so they are generally available to non-QL owners. However you must boot the QL from the Qdos support disk to load them, or explicitly load the extensions (PDTK_REXT).
When you RUN the program it displays a grid where horizontal and vertical locations correspond to notes in the scale on each channel. Move the mouse from bottom left to top right to play an ascending scale on both channels. All combinations give harmonious ratios.
To cycle through four variations of timbre, corresponding to the waves in the DATA statements and the diagram, press plus or minus. You can add more realistic waves by loading longer raw samples in place of these patterns. These simple examples have sharp edges which generate odd harmonics. Press # to toggle the smoothing filter on and off, and SPACE when you've heard enough.

The program

The first ten lines build a NOTE% array containing wave periods for an eight octave range. The array holds arbitrary integers, but floating point arithmetic preserves accurate intermediate results. The initial value of HERE determines the lowest pitch. Successive notes are scaled by the 9th, 17th, 31st and 39th power of the 53rd root of two, giving precise pentatonic steps to the next octave, with twice the frequency and half the period of the one before.
The next lines assign names to Amiga hardware addresses, and read four short wave patterns from DATA into a small area of chip RAM Amiga Qdos leaves free. The CD version uses more elaborate memory allocation, allowing much longer waves. The next dozen lines display the grid and instructions in a new screen window, #3. These are just 'chrome' but give visual feedback to the user.
The real metal bashing follows, with six POKEs that initialise Paula audio channels 0 and 1 to maximum volume, point the AUD_LC registers at the start of the wave and set the lengths in AUD_LEN to eight samples, or four words. Two more POKEs disable modulation interaction between channels, and start DMA for audio channels 0 and 1.
The top bit of these registers determines whether other bits are set or cleared, as explained in part 2. The first POKE_W clears the low eight bits in ADKCON. The second sets the bottom two in DMACONx, as -32768 yields a word with the most significant bit set.
The REPeat loop plays notes corresponding to the mouse position and key controls. X and Y pointer positions from 0 to 239 are converted to note numbers, 0 to 39, by dividing by six. The period for each channel is set according to rates in the NOTE% array. As the mouse pointer moves the pitches change, according to the pre-calculated scale.
The INKEY$ function reads the currently-pressed key character into K$. A space (ASCII character 32) breaks out of the loop, closing the window and turning off the pointer and sound DMA. Otherwise if the hash key is pressed the filter is switched by toggling the value of the second bit in CIAA port A, as explained in part 1 of this series.
The plus and minus keys cycle between the preset waves by stepping the VOICE offset backwards or forwards between 0, 8, 16 and 24, to point at each wave in the area starting at CHIPX. If you use more detailed waves, or a mixture of sizes, add arrays holding the base and length of each. You could include hundreds of distinct samples. Just put the raw sample values in chip memory, and set the start and size with POKEs. ■

The Listing

```
100 REMark ****** Amiga Qdos MOUSE ORGAN STEREO SYNTHESISER
110 DIM note%(39): root=2^(1/53):   REMark Pentatonic
120 note2=root^9: note3=root^17:    REMark musical scale
130 note4=root^31: note5=root^39:   REMark constant ratios
140 here=28800: REMark Initial pitch or try 25920, or 32767
150 FOR SCAL=39 TO 4 STEP -5
160   note%(SCAL)=here:          note%(SCAL-1)=here/note2
170   note%(SCAL-2)=here/note3: note%(SCAL-3)=here/note4
180   note%(SCAL-4)=here/note5: here=here/2 :END FOR SCAL
190 REMark ****** Amiga Custom Chip hardware addresses
200 chip_top=2^21: REMark Limit of chip RAM
210 pra    =HEX("BFE001"): REMark CIA port A (filter etc)
220 DMACONx=HEX("DFF096"): adkcon =HEX("DFF09E")
230 aud0lc =HEX("DFF0A0"): aud0len=aud0lc+4
240 aud0per=aud0lc+6:      aud0vol=aud0lc+8
250 aud1lc =aud0lc+16:     aud1len=aud0len+16
260 aud1per=aud0per+16:    aud1vol=aud0vol+16
270 RESTORE : REMark Prepare four simple waves in Chip RAM
280 filt=0: voice=16: MaxVoice=32 : chipx=ALCHP(MaxVoice)
290 fast_ram=(chipx>=chip_top): REMark chipx=98688 is free
300 IF fast_ram THEN RECHP chipx: chipx=PEEK_L(SYSBASE+124)
310 FOR i=chipx TO chipx+MaxVoice-1: READ x: POKE i,x
320 DATA -126,-90,-54,-18,18,54,90,126:     REMark Sawtooth
330 DATA 127,127,127,127,-127,-127,-127,-127: REMark Square
340 DATA 0,90,127,90,0,-90,-127,-90:        REMark Sine wave
350 DATA 0,127,0,-127,63,-63,32,-32:        REMark Harmonics
360 PTR_LIMITS 0,0,239,239: PTR_POS 120,120: REMark Pointer
370 PTR_INC 1,1 : PTR_ON: REMark Display box grid of notes
380 OPEN #3,scr_480x240a0x0: CLS #3: FOR j=6 TO 239 STEP 6
390 pen=3 + ((j MOD 30)=18): BLOCK #3,2,240,j*2,0,pen
400   BLOCK #3,480,1,0,j,pen: END FOR j
410 CSIZE #3,2,1: OVER #3,-1: INK #3,7 :REMark Big heading
420 PRINT #3,\,"    AMIGA MOUSE ORGAN"\\:OVER #3,1:INK #3,4
430 PRINT #3;" Move the mouse to play a stereo sample"
440 PRINT #3;" Keys +/- alter timbre # toggles filter"\\
450 PRINT #3;"    Top left gives highest pitches"
460 PRINT #3;"    Bottom right for lowest pitches"\\
470 PRINT #3;" Press  SPACE  for silent SuperBASIC..."
480 REMark ****** Initialise audio hardware registers
490 POKE_L aud0lc,chipx+voice: POKE_W aud0len,4
500 POKE_L aud1lc,chipx+voice: POKE_W aud1len,4
510 POKE_W aud0vol,64: POKE_W aud0per,789
520 POKE_W aud1vol,64: POKE_W aud1per,789
530 POKE_W adkcon,255 :POKE_W DMACONx,(1+2)-32768
540 REPeat singing
550   POKE_W aud0per,note%(PTR_X% DIV 6): REMark X pitch
560   POKE_W aud1per,note%(PTR_Y% DIV 6): REMark Y pitch
570   k$=INKEY$ : IF k$=" " THEN EXIT singing
580   IF k$="#": filt=NOT filt:POKE pra,PEEK(pra)^^(filt*2)
590   IF k$="+" OR k$="-"
600     IF k$="+" THEN voice=(voice+8) MOD MaxVoice
610     IF k$="-" THEN voice=(voice-8) MOD MaxVoice
620     POKE_L aud0lc,chipx+voice:POKE_L aud1lc,chipx+voice
630   END IF :REMark A new wave table has been selected
640 END REPeat singing: CLOSE #3: PTR_OFF
650 POKE_W DMACONx,1+2: IF NOT fast_ram THEN RECHP chipx
```

British Bank/Public Holidays

by David Denham

Further to Geoff's Calendars and Bank Holidays article in QL Today (which made reference to my Clocking In series), here are a few points of reference and useful information for those wishing to write calendar programs using this information. Firstly, some websites dealing with and listing these British public holidays (useful both for reference and testing your programs):

www.bankholidaydates.co.uk
www.berr.gov.uk/whatwedo/employment/bank-public-holidays/

(BERR is the UK government's department for Business, Enterprise and Regulatory Reform.)

Information on how the actual dates of holidays are assigned.

The eight public holidays in England and Wales are:
New Year's Day
Good Friday
Easter Monday
May Day (first Monday in May)
Spring Bank Holiday (last Monday in May)
Summer Bank Holiday (last Monday in August)
Christmas Day
Boxing Day

In Scotland, the dates are:
New Year's Day
Good Friday
Early May Bank Holiday (first Monday in May)
Spring Bank Holiday (last Monday in May)
Summer Bank Holiday (first Monday in August)
St. Andrew's Day (30 November or next Monday if a weekend, from 2007)
Christmas Day
Boxing Day
(In addition in Scotland, although not bank holidays, Easter Monday is observed by many banks and companies, and the majority of banks are closed on the last Monday in August)

In Northern Ireland, the dates are:
New Year's Day
St Patrick's Day (17th March)
Good Friday
Easter Monday
Early May Bank Holiday (first Monday in May)
Spring Bank Holiday (last Monday in May)
Battle Of The Boyne (Orangemen's Day 12th July) (Second Monday of July)
Summer Bank Holiday (last Monday of August)
Christmas Day
Boxing Day

Public holidays vary in Scotland and Northern Ireland, for example the St Andrew's Day Holiday (Scotland) Bill was approved by Parliament on Wednesday November 29, 2006. It aims to promote St Andrew's Day on November 30 as a national celebration of Scottish identity and culture across the whole of Scotland. Further information below.

What happens when bank holidays fall on a weekend? Substitute days are customarily appointed for all UK bank and public holidays which fall on a Saturday or Sunday. For some bank holidays, these substitute days are laid down in legislation. In other cases, they are appointed by Royal Proclamation (or Proclamation by the Secretary of State for Northern Ireland). The substitute day is normally the following Monday.

British Summer Time

Sometime in March and October we start to worry about changing our clocks for summer time. It is not generally known that it is easy to work out when this happens, and whether clocks go forward or backward at that time.

EC Directives have set the start and end dates of summer time in all Member States since 1981. The 9th directive sets start date as last Sunday of March and end date as last Sunday of October.

As for whether clocks go forward or backward, simply remember the American phrase "Spring forward, Fall back" (for Fall, read Autumn this side of the Atlantic). For Spring Forward, turn the clocks forward at that time in Spring, while for Fall Back turn the clock back in Autumn.

MultiCal

Geoff correctly states that there's a number of calendar-making programs for the QL. Many people have, as he implies, cut their programming teeth on calendar programs, using calculation methods like Zeller's Congruence. For me, what defines a good program is the type of layouts of calendars they offer. You can keep it simple like my MiniCal program (a simple program designed to offer on-screen calendars using minimal screen space), or you can go for broke with a much more complex program like Dilwyn Jones's MultiCal program, available from his website at

www.dilwyn.uk6.net/utils/index.html

along with other calendar program.

```
MULTI-CAL CALENDAR PROGRAM

1 - 12 month mini calendar, days horizontal
2 - 12 month mini calendar, days vertical
3 - Month per page, line per day
4 - Daily planner (month per page)
5 - Monthly planner (year per page)
6 - Week-to-view diary
0 - Quit

Calendar type >
```

MultiCal lets you create a variety of calendar layouts, as you can see from the screen dump. This can be mini-calendars with the day names above or to one side of the month's calendar, month per page with line per day, daily planners with one month per page, monthly planners with year per page and even a diary (week to view). There are handy little options which can be set like which day of the week appears first,making it easy to generate calendars running to a calendar week of Sunday to Saturday, or a working week starting on Monday, or even weeks starting with a whole weekend (i.e. Saturday, Sunday, Monday to Friday).

The calendars are claimed to work from 1582 to 4902 (subject to when a country adopted the current calendar system). The program works by asking you to enter the available options as a series of questions, and you can print a calendar or save one to file as a plain text file which you can then import into a word processor or DTP program to "tart up" by adding lines, boxes, pictures etc.

The program is written in Basic, so you can take it apart to have a look at how it was written and amend it to generate the types of calendars, planners, diaries etc you want to create. ■

QL-Aided Design Part 1

by Simon Balderson

This program came about after I set about building a replacement valve preamplifier for my modified Quad 22 preamp. I needed something with some sort of tone control, in particular the 'loudness' type of tone control which used to be common in audio equipment of yesteryear. It was especially common in radios and radiograms. Loudness controls are still fitted in some modern audio equipment like in-car audio. Its function is to compensate for a peculiarity of human hearing where bass and treble tones are heard less and less with falling volume. As you turn the volume control down bass and treble are boosted automatically so that the overall tonal content sounds the same. If you have one fitted try comparing music with the control operating and without. You'll probably find the tonal content sounds much better with the control working. I find that amplifiers both vintage and modern just sound better when fitted with a loudness control. Nearly all the modern preamplifier designs I have seen do not include any method of tone compensation. After a bit of research I found a reference to a design for a loudness compensated volume control entitled 'A Two-tap Bass and Treble Compensated Volume Control' by William O. Brooks published In Audio Engineering, August 1951, page 15. The design relies upon the availability of a tapped potentiometer which these days are near impossible to buy off-the-shelf.

To solve this problem I wrote two programs. One calculates the component values that make up the network in a switched volume control which can be tapped at any point, the other works out the tone compensation component values. I found the method for calculating the volume control values on page 794 of 'The Radio Designer's Handbook' by F. Langford-Smith, 4th edition, 4th impression 1957. This same book is also the source of the reference mentioned above (pg. 678, ref. 88). To make the displayed results of the programs a little more interesting I used Wolfgang Lenerz's bitmap extensions to insert circuit diagram illustrations in the display channel. Wolfgang has written quite a few extensions for manipulating image files for use with PCs and the QL. There are several extensions to cope with various combinations of picture conversions but if you already have pictures stored as 256 colour PC bitmaps then the extension below can use them directly.

This text is taken from the instructions for using the extensions.

```
BMP8LOAD [#chan%,] filename$
```

This directly loads the existing 256 colour PC bitmap file onto the screen. The image will be made to fit into the channel. If no channel is given, channel #1 is used. If the image is too large in any dimension with respect to the channel size, then it will be clipped. The image is always loaded so that it starts being displayed in the upper left corner of the channel - no centring here.

The extensions to handle images are in a file called 'bmpcvt_bin' and you need to add a line to your Boot file to load the bitmap convertor extensions and make them resident.

```
LRESPR bmpcvt_bin
```

The extensions are contained in a Zip file named bmpcvt_zip. I downloaded the BMP Conversion extensions from the Dilwyn Jones website:
http://www.dilwyn.uk6.net/graphics/index.html

To use the BMP8LOAD extension the image must be either a colour or greyscale bitmap made up of 256 colours or shades of grey. As mentioned earlier it must fit in the window it is to appear in otherwise it will be clipped. In this instance the image was sized to be 615 pixels wide by 350 high. Sadly as yet, we have no software for the QL that allows images to be manipulated and file formats converted with the ease that is commonplace on a PC. Using Adobe Photoshop Elements I first created the background image and then saved it as an 8 bit 256 colour bitmap, copying it over to my Win3 drive.

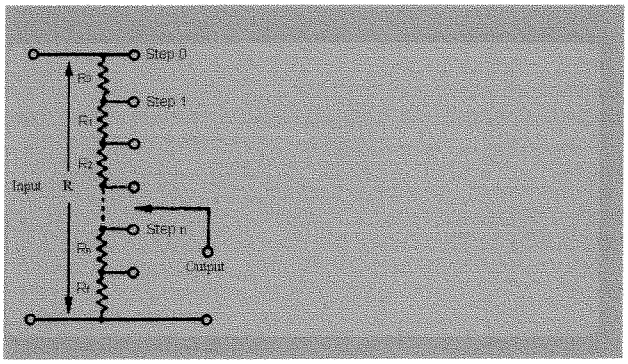

Figure 1

Figure 1 shows the background image with the circuit diagram of the resistor chain. This is loaded into channel 7 at line 60 with the BMP8LOAD command.

Below is the program to calculate component values for a switched attenuator otherwise known as a volume control. The number of steps can be between 3 and 30, overall resistance value between 1000 and 2 million ohms. Decibel changes between steps can be 1 to 5 Db. This program is written for SMSQ/E in High Colour mode running under QPC2.

The Radio Designer's Handbook gives the method for calculating the values thus -

Let R= total resistance of the attenuator

N= voltage ratio corresponding to decibel steps between each point
M= 1-N

The values are calculated like so:

$R0=MR$; $R1=MNR$; $R2=MN^2R$; $R3=MN^nR$ etc.
$Rf=R-R0-R1-R2- \ldots . R_n$

```
10 REMark Dec 2005, Jan 2006, May 2007
20 OPEN #7,con: COLOUR_24, #7 Open a high colour channel

30 Centre_scr 7,60,50: PAPER #7, $84C6: INK #7,0: CLS #7: BORDER #7,1,255
```
(Open a centred window 60% of screen width and 50% of screen height with a light blue paper. The program is geared towards a screen resolution of 1024 x 768 pixels. Any other resolutions will result in QLiberator error messages and a program crash.)

```
40 LET Pic$="win2_Sbasic_Background_bmp"
```
(A 256 colour bitmap image created using Photoshop Elements showing the circuit diagram for the resistor chain).

```
50 REPeat start
60 BMP8LOAD #7, Pic$: CSIZE #7,2,0: INK #7,0
70 Blank_line 7,35,5
80 REMark -- NO. OF STEPS --
90 REPeat SwitchSteps
100 AT #7,35,5: INPUT #7;"No. of switch steps? ";Steps
110 LET Steps=INT(Steps)
120 IF Steps >2 AND Steps <31 THEN EXIT SwitchSteps
130 AT #7,36,5: PRINT #7,"Must be greater than 2 and less than 31"
140 Blank_line 7,35,5
150 END REPeat SwitchSteps
160 Blank_line 7,36,5
170 REMark -- GET RESISTANCE --
180 REPeat Resistance
190 Blank_line 7,35,5
200 AT #7,35,5: INPUT #7;"Total resistance of chain in Ohms? ";Res
210 IF Res >999 AND Res <2E6+1 THEN EXIT Resistance
220 AT #7,36,5: PRINT #7,"Must be greater than 999 Ohms and"
230 AT #7,37,5: PRINT #7,"less than or equal to 2 Megohms"
240 Blank_line 7,35,5
250 END REPeat Resistance
260 LET Rf=Res
270 Blank_line 7,36,5: Blank_line 7,37,5
280 REMark -- GET DECIBEL STEPS --
290 REPeat DBSteps
300 Blank_line 7,35,5
310 AT #7,35,5: INPUT #7;"Decibel change between steps?",Db
320 IF Db>=1 AND Db<=5 THEN EXIT DBSteps
330 AT #7,36,5: PRINT #7;"Must be between 1 and 5"
340 Blank_line 7,35,5
350 END REPeat DBSteps
360 Blank_line 7,36,5
370 CSIZE #7,0,0
```

```
380 REMark -- PRINT RESULTS --
390 OVER #7,1
400 LET n=1-VRatio(Db)

410 DIM Rx(Steps-2)
```
(Store the calculation results in an array whose length is two less than the number of switch steps. No need to calculate first or last switch positions as attenuation is zero for the former and infinite for the latter.)

```
420 LET Rx(0)=n*Res
430 LET Rf=Rf-Rx(0)
440 AT #7,2,50: PRINT #7,"R0= ";INT(Rx(0));" Ohms"
450 FOR q= 1 TO Steps-3
460 LET Rx(q)=(n*VRatio(Db)^q)*Res
470 LET Rf=Rf-Rx(q)
480 PRINT #7; TO 50;"R";q;"= ";INT(Rx(q))
490 END FOR q
500 PRINT #7; TO 50;"Rf= ";INT(Rf)
510 PRINT #7; TO 50;"Chain resistance= ";Res/1000;"K ohms"
520 PRINT #7; TO 50;"Switch steps= "; Steps
530 PRINT #7; TO 50;"Decibel steps= "; Db
540 INK #7;$320075: AT #7,5,75: PRINT #7,"Press F5 to repeat"
550 PRINT #7; TO 75;"F6 to Print and Exit"
560 PRINT #7; TO 75;"or F7 to Exit"
570 OVER #7,0: keyscan
580 SELect ON z
590 REMark -- F7 EXIT PROGRAM --
600 ON z=238
610 CLOSE #7: WMON2: EXIT start: CLEAR
620 REMark -- PRINT --
630 ON z=234
640 Print_Results
650 CLOSE #7: WMON2: EXIT start: CLEAR
660 IF z <>248 THEN keyscan
670 REMark -- F5 START AGAIN --
680 END SELect
690 END REPeat start
700 REMark -- WHICH KEY ARE YOU PRESSING? --
710 DEFine PROCedure keyscan
720 REPeat Scan
730 LET z=CODE (INKEY$(#7))
740 IF z=238 OR z=234 OR z=248 THEN EXIT Scan
750 END REPeat Scan
760 END DEFine keyscan
```

(The procedure Centre_scr centres and sizes a window on the specified channel, i.e. channel 7, 60% wide by 50% high. The technique to centre it is based on the method of centring text on a typewritten page back in the days when I did my R.S.A 1 typewriting course. Count the number of spaces across a page (SCR_XLIM) , divide by two and then backspace by the answer which in this case is the origin for the window.)

```
770 DEFine PROCedure Centre_scr (chnl,xpcnt,ypcnt)
780 WHEN ERRor
790 IF ERR_NO THEN PRINT #0, "Channel is not open": STOP: WMON2
```

(WMON2 - a small procedure QLiberator compiled as an external as part of my Boot program to open the traditional three windows sized for larger screen resolutions. Figure 2 shows the three windows in the background. Instead of the traditional QL red and white paper channels 1 and 2 are replaced by seasonal bitmap images that change throughout the year. See QUANTA Vol. 19 issue 8 (Sept. 2002).)

```
800 IF ERR_OR THEN PRINT #0, "Width or height dimensions greater than 100%": STOP: WMON2
810 END WHEN
820 WINDOW #chnl, SCR_XLIM * (xpcnt/100),SCR_YLIM * (ypcnt/100), (SCR_XLIM-((xpcnt/100) *
    SCR_XLIM))/2,(SCR_YLIM-((ypcnt/100) * SCR_YLIM))/2
830 END DEFine Centre_scr

840 DEFine PROCedure Blank_line (chnl,d,a)
```
(Rather than use CLS which would erase the background picture this procedure clears a line of text by overwriting with 45 blank spaces.)

```
850 AT chnl,d,a: PRINT #chnl;" "
860 END DEFine Blank_line
870 DEFine FuNction VRatio (d) Finds the voltage ratio between steps of the
    attenuator ladder.
880 LET Ratio=1/(10^(d/20))
890 RETurn Ratio
900 END DEFine VRatio
```

(A very basic routine to print the results on paper. This works fine with QPC Print.)

```
910 DEFine PROCedure Print_Results
920 OPEN #8,par
930 PRINT #8;CHR$(27)&"m"
940 PRINT #8;CHR$(27)&"l"
950 PRINT #8;"Resistor chain values are as follows -"
960 PRINT #8;"R0= ";INT(Rx(0));" Ohms"
970 FOR j=1 TO Steps-3
980 PRINT #8;"R";j;"= ";INT(Rx(j))
990 END FOR j
1000 PRINT #8;"Rf= ";INT(Rf)
1010 PRINT #8;"Chain resistance= ";Res/1000;"K Ohms"
1020 PRINT #8;"No. of steps= ";Steps
1030 PRINT #8;"Decibel steps= ";Db
1040 CLOSE #8
1050 END DEFine Print_Results
```

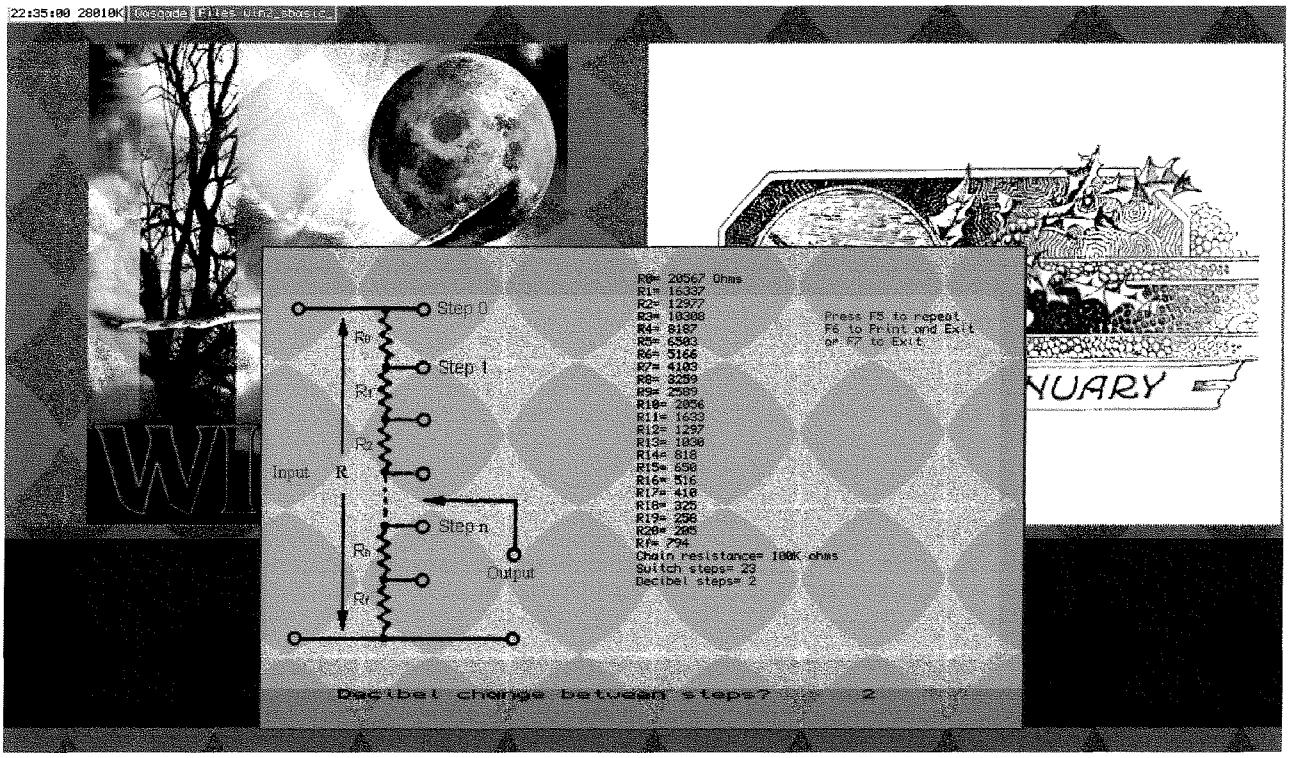

Figure 2

Figure 2 shows the program window centred mid screen with the results for a 100Kohm potentiometer with 23 positions. The results are reproduced below. All values are in ohms. To get a good range of volume control a multi-way switch with more than the usual twelve positions is needed. The one I chose is a four pole 23-way switch made by Electroswitch which I acquired by mail order from Parts Connexion in Canada - (**http://www.partsconnexion.com**). Only two of the four poles are needed. I used 1% tolerance 0.6W metal film resistors in the control using nearest values to the calculated ones.

```
R0 = 20567
R1 = 16337
R2 = 12977
R3 = 10308
R4 = 8187
R5 = 6503
R6 = 5166
R7 = 4103
R8 = 3259
R9 = 2589
R10 = 2056
R11 = 1633
R12 = 1297
R13 = 1030
R14 = 818
R15 = 650
R16 = 516
R17 = 410
R18 = 325
R19 = 258
R20 = 205
Rf = 794
```

Now we have some component values suitable tapping points can be found in the chain for the loudness control circuit. Part two of the article deals with the program to calculate these tapping points and the capacitor values for tone compensation. ■

George's & Norman's assembler dialogue - re. Part 22

by George Gwilt and Norman Dunbar

Editor's comment: *[GG]* stands for George Gwilt, *[ND]* for Norman Dunbar

[GG] In Part 22 of his articles on Assembler Programming Norman Dunbar asked if anyone had noticed his absence in the previous issue of QL Today. The answer is that of course I did because there was no article inviting comment! We are now back to normal. That is to say I have a few comments on this latest useful and interesting article.

[ND] Actually, it shows how long ago I wrote that article, it was ages ago that I was in Sicily!

Application Sub Windows

[GG] My first comment is on the section Application Sub Windows. These are not really what is left after all other contents are removed.

[ND] Yes, it wasn't the best description was it!

[GG] They are similar to information windows in that each one occupies a defined space inside the main window. In addition you can cause actions to occur just by clicking on an application window. There is no facility for that in information windows. Also you can have a menu of items in an application window but not in an information window.

[ND] The above is a much better description of an Application Sub-Window. While there are programs where the ASW is indeed 'what is left' and doesn't need or have a menu within it, there are some others that do have menus and so on.

[GG] I am interested that Norman says that a graphics program would draw in an application window. In fact one of my examples, EX3, draws in an information window. Perhaps I should change my example.

[ND] No, don't change it! An ASW could be drawn in (I said 'would' I meant 'could'). As George points out, the graphics program could equally well draw within an information sub-window.

Sprites, Blobs and Patterns

[GG] As Norman implies, a SPRITE has a shape and colour pattern. A BLOB has a shape but no colour and a PATTERN has colour but no shape.

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http://www.rwapservices.co.uk (General site)
http://www.rwapsoftware.co.uk (Sinclair computer second hand and new items)
http://www.rwapadventures.com (Adventure Programs)
http://www.internetbusinessangels.com (Guidance on setting up online businesses).

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Notes:
Q-Word DOES NOT require SMSQ/E with GD2 support -OR- SMSQ/E at all on the Aurora or Qx0 machines. It works on the highest colour depth everywhere regardless of Operating System.
The Aurora version is available on either HD or ED disk. For the latter add £1.00 to the price. ED version is uncompressed and can be run directly from the floppy. All other Floppy versions are compressed. QPC/QXL version comes on CD. Non CD versions DO NOW support digital sound on QPC2

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QL Genealogist v3.26 *Genealogy*	£ 20.00
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Britain map v1.11	£ 2.00
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Catalonia map v1.03	£ 2.00
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Leisure

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Nemesis MkII v2.03 *Adventure*	£ 8.00
The Prawn v2.01 *Adventure*	£ 8.00
Horrorday v3.1 *Adventure*	£ 8.00
West v2.00 *Adventure*	£ 5.00
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All 6 games above	£ 25.00
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Flightdeck v1.0 *Flight Simulation*	£ 10.00
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Notes on Software requirements

The following programs have a minimum SGC card requirement: P-Word, Qword, Big Britain MAP for Q-Route

RWAP Services
3 Dale View Court, Fulford, Stoke-On-Trent, Staffordshire ST11 9BA TEL: (+44) 1782 398143 From the UK Dial: 01782 398143
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However combining a BLOB and a PATTERN does not give the same result as a SPRITE.

[ND] I was working from the original documentation for the PE and that is what I read. The example given – as far as I can remember (I'm not at home just now) – was that of a pattern and a blob being combined to draw a wall on screen. The pattern defines the colour and the blob the shape etc. I'm sure the docs mentioned that if I wanted a red and a blue and green set of bricks, my blob would define the bricks and I would have a pattern in each of the colours I needed. Combining the one blob with each of the patterns would give me the red, green and blue bricks. I shall (obviously) have to look deeper into blobs and patterns in a future article.

[GG] A PATTERN is an area of colour which is repeated over the whole screen. If the PATTERN were part of a picture, as it could be, the picture would be repeated all over the screen. If a BLOB is combined with a PATTERN and is drawn at a particular part of the screen, the result is as if the BLOB's shape were ripped from that part of the screen to reveal the PATTERN beneath. Obviously different parts of the picture would show if the BLOB were drawn at different places on the screen. So a BLOB in one place might be seen as mostly blue but in another red and white.

[ND] As I said above, I must look deeper at blobs and patterns now. The above explanation is nothing like what I understood about blobs and patterns. Mind you, I have not found a use for them yet – which may explain my ignorance!

Standard Windows Definition

[GG] In the attributes for his window Norman sets the first byte to zero with the comment MS bit clear to call CLS.

[GG] I am very glad that Norman mentioned this because I had not up to now realised the significance of this MS bit being set, which is to leave the window contents unaltered, but have now used it successfully.

[GG] Incidentally, the LS bit of that byte, if set, prevents keys from moving the pointer allowing only the mouse to move it.

[ND] Finally! I got something right. The details of the LS bit is new to me – my docs obviously need updating again!

Scaling

[GG] On page 40 Norman mentions scaling. He rightly says that a particular repeated section of a main window can be scaled if the top nibble of a size dimension is %0100. But he goes on to say that he thinks this is a contradiction in the documentation.

[ND] Well, my docs state that scaling must have the nibble set to %0100 but later on in the docs, there are other values mentioned. Confusing the issue – at least for me anyway!

[GG] The point is that the definitions of all other items in the window allow scaling in amounts of a complete number of quarters of the total scaling. The total amount of scaling is defined as the proportion of the total possible increase from the minimum in the repeated section to the maximum which is the amount in the previous repeated section if any or the amount in the fixed section otherwise. It would make no sense to have anything else than 100% scaling for the main window which is what %0100 implies.

[ND] I think I see now, maybe it isn't a contradiction in the docs, just one in my own reading of the docs. It would help if I could speak English properly!

[GG] I cannot see what the contradiction is. I shall therefore be interested to read Norman's promised future remarks about scaling.

[ND] Not half as much as I'll be interested to see what I write! Scaling has been a bone of contention with me in the past – other than the fact that EasyPTR 3 (I don't have Marcel's upgraded EasyPTR 4 yet) didn't allow menus to be scaled at all.

QPAC2 allows windows to grow and shrink depending on their contents – the Files menu for example. With a few files, the window is small, with lots, it is much bigger.

I have seen windows that scale in 'jumps' of a certain size and others that scroll smoothly to the actual size chosen by the user. I feel quite a lot of investigation is required.

I suspect I'm confused between scaling and the repeated part of the window definition at the moment. Once I delve a little deeper, it may become clear. At least, I hope it does!

■

Per Witte writes:

To David Denham's Configuration Block utilities (QLT V13/I2):

There is another program that produces Config blocks: My MkConfig. The reason it may be worth mentioning yet another Make Config program is that this is probably one of the simplest ones around. Written in SuperBASIC, its output is two lines of SuperBASIC that can be merged directly into your program source and compiled. No faffing around with added modules and extra files. Incidentally, it's the only program I know of that lets you configure your SuperBASIC source code directly with (Menu)Config! (But why the heck would anyone want to do that?) So, if all you want is to add a single configurable item to a compiled SuperBASIC program, e.g. a Home Directory for systems that don't have the Homedir Thing, this is one to try. Available at

www.witteware.com/knoware

under Articles, MkConfig.

Ian Burkinshaw writes:

The Future for QL Today

As I always do, I find QL Today a very good and useful magazine. The last issue Vol 13 issue 2 particularly so. QL Today may have published two articles that I have written one of which was spurred on by an article in that issue.

However the point of my letter is the future for the QL and QL Today. I was very interested in the points made by Jochen Merz and Roy Wood in Vol 13 Issue 2.

The fundamental issues as I see it are as follows: The numbers and types of users. We all know, we are now a very small group, a few hundred at most. These users fall into various groups. Users who use their QL systems for what I will call data processing. That is word processing, spreadsheets and databases. Some users do some SuperBasic programing, that's me by the way. Also users who are into machine code programming. There are people who are Quanta members and some who are QL Today subscribers, some subscribe to both and some users who do not subscribe to either.

I use my QL systems for what may be described as minority interests. I find SuperBASIC a good way to develop my applications for my own interests, such radio receiver control, GPS decoding, electronic projects and model railways. I do a bit of PIC programing as well but mostly SuperBASIC.

The recent exchanges in QL Today and Quanta magazine over things like Tony Firshman's reduction in his QL activities did no one any favours. At least Quanta have sorted this one out now. It was a simple mistake that seems to have got out of hand. However the issues may be important to the people affected, but not to most members/subscribers. It is not what we pay our membership/subscriptions for. I hope we do not see much more like this in either QL Today or Quanta magazine again. I have to say I just skip things like this. I doubt I am alone in doing this. So as far as to say this unfortunate exchange may cause some members/subscribers not to renew their memberships. So this then becomes a self fulfilling situation in the decline of our little community.

It is a shame, I have seen this so many times in small clubs and societies that seem to press the self-destruct button with minor issues that get out of hand and people getting so possessive and lose sight of the bigger issues that are in everybody's interests. We must stop the bickering, since that will end it all forever. I also think this is one of the reasons people are reluctant to get involved with committees in general, not just Quanta. The other issue, people these days just don't seem to have the time either, that's me as well. I will be the first one to put my hand up, I just wish there was more time to do things.

So what is the way forward. Well I think the time has come for Quanta and QL Today to become one entity. Since the major contributors to both magazines are the same. This saves duplication. It would also save splitting the limited content across both publications. Quanta has a problem with recruiting committee officers and more particularly the magazine editor, So this may help with this issue.

There is the question regarding the funds that Quanta have. I do feel these should be used. Supporting hardware development is clearly not a going option, with so many people now using emulators. The costs are too great for the benefit for the members/subscribers. However the updating of The SBASIC/SuperBASIC Reference Manual and converting the Jan Jones, QL SuperBASIC handbook into searchable PDF format should be undertaken. Taking the view it is not worth it, because there will be no return in the current state of affairs is not the way forward. What is the money for? If not for the benefit of

the members. Yes it will make a loss, but there are a lot of users out there who have contributed a lot of money over the years, and frankly have not seen a lot in return. This would correct the balance. In this credit crunch time, people will be looking at their outgoings and things like Quanta and QL Today will be high on the list of things that are not essential, or they may go with one and not the other. Either way we will lose more members/subscribers, just do not give them the excuse to cancel. The above idea would help in retaining members as well if they could see a return for their membership apart from the magazine. Which as we all know has been lacking. I am not blaming anybody here it is a fact of life. But we must look at other ways forward. Otherwise it will disappear very quickly. It would be good to include in The SBASIC/SuperBASIC reference manual all the QPTR and Qmenu keywords. I feel this would make it complete. Also other users who do not have it, may purchase it with this additional information. The funds could be used not only to pay for this work but also subsidise purchases to all members/subscribers benefit.

[Editor's comment: There is a lot of truth in your letter. We don't want to comment on the Quanta/TF stuff, we're glad it is sorted out.
QL Today and Quanta cannot become one entity... simply because I, Jochen, prefer to stay independent.
However, I would be happy to find ways of reducing the costs and gaining more readers. If you feel that the Quanta magazine could/should be merged into QL Today (to become one entity), then I am open to suggestions. Possible ways have been done in the past with the German QL club. They paid a bit more, and there were 4, 6 or 8 pages added to the magazine just for the club members. This way, a lot of postage was saved and there was no urge to fill a magazine simply because it had to be there. That was practical at a time when we had hundreds and hundred of club members and non-club members.
However, in the present situation, I would rather suggest something like: Quanta pays half of the QL subscribtion for its members (subsidises it ... I think it would be a good investment for the readers) and gets 4, 6 or 8 pages for Quanta-matters inside the magazine for which Quanta would be responsible, a "Quanta section". If that's interesting stuff, it may lead even to QL-Today only readers to become Quanta members, to benefit from both.
This, for example, would remove a lot of pressure from Quanta in trying to fill a magazine. I honour John Gilpin's work (especially the last Quanta issue was very well done), but John told me some time ago that he had too many things to do.
All this is just a thought, which immediately came to mind when I read the letter from Ian.
If you look at the renewal form at the end of the magazine, then you will see that there is and was no plan for anything like the suggestions I made here.
I am open to suggestions, but in the end the Quanta members decide. And if we want anything to change quickly, the decisions have to be made quickly.
Maybe, hopefully not, Ian may be right sooner or later and we lose everything, because the numbers are too small and nothing is worthwhile anymore.
We don't want this to happen. We are prepared for Volume 14.
But, good things and good ideas can always be improved, and we are happy to help!

George Gwilt writes:
In my article on Special Characters in QL Today Vol 13 Issue 2 in the section headed Pound Sign and Hash the pound sign does not appear. In the four cases when it should have been printed a small tick appears instead. Do you have knowledge of an even further devaluation of the UK pound? Anyway, to gratify the curiosity of any readers

```
Please replace ` by £

(This is a _pic file to avoid
 one of the following:

Please replace ` by `
Please replace £ by £
Please replace £ by `)
```

[Editor's comment: thanks for pointing this out, George. That was not deliberate. Shall we use › next time, as the pound has recovered recently by 5% or so...?]
■

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Where Has The Wood Gone?

by Norman Dunbar

It was with much regret that I read "The Final Byts of Wood" in Volume 13 Issue 2 of our esteemed and much loved periodical. Or "comic" as my wife calls it!

I have always enjoyed Roy's comments on life, the universe and just about everything related and unrelated to our QL and derivatives. To hear that he would (Wood?) be no more was bad news indeed.

I'd like to wish Roy all the best in whatever he chooses to do in the future and I hope that he will continue to write for QL Today from time to time and as life sees fit.

Now, that's the "buttering up" but done, I am now about to disagree with some of Roy's comments. I realise what he says and writes is his opinion, but it doesn't always mean he is right!

Page 51.

Roy states "these days nothing can touch a Wintel system - oh yes I can hear the groans and moans and cries of the LINUX and MAC supporters out there but really, wake up and taste the horlicks."

Well, I'm a Windows and Linux user, Linux by choice and Windows by necessity at work. I agree that in the past, nothing could touch Wintel - there wasn't really any choice, was there? Microsoft forced PC manufacturers to install Windows or else. Those days are not yet long gone, but are very gradually fading.

I use Linux at home for business and pleasure, and at work for reliability and stability. Say no more. Lintel works and works excellently. Wintel works too, but not as reliably I'm afraid. Our Wintel servers are always requiring a reboot while our Lintel ones simply run and run and run.

I don't actually like horlicks anyway, so tasting it is not for me I'm afraid! ;-)

Roy mentions that " ... the whole computer business is running on empty. Games consoles now account for the bulk ....". On this point I agree 100% with Roy. This is possibly why Microsoft are having difficulties, they have never innovated and now the market is vanishing from under them, they have nothing to offer, other than the X Box of course. With its "red ring of death" it is just like their operating systems with their "blue screen of death". Nothing changes with Microsoft!

As a community we had our share of geek programmers and users...". I think we still do, to a smaller extent, got some geeks left. Let's face it, The QL is how old? People move on, some stick around. There are plenty of Steam Train enthusiasts out there even though those trains are, to all intents and purposes, long gone. The QL is also long gone, I'm afraid, and only we enthusiasts stick around and keep it alive, in a small way.

Page 52 Linux

"It is on the desktop that Linux just does not cut the ketchup, let alone the mustard". Hmmmm. I'm afraid you will find that it cuts the mustard quite happily. My own laptop is in use daily for email, surfing, development, documentation writing, CD ripping, converting my LP and singles collection to ogg format (similar to MP3 but better and less lossy), sound recording and editing and photography work with Gimp etc. It's not a state of the art laptop having a maximum of 1GB RAM and a Pentium P4 processor - no dual core stuff and oodles of RAM here. It just works.

I'm running OpenSuse 11.1 on it with KDE4.1 and it simply does what it does. I play my music while doing my accounts (I watch DVDs when I should be doing accounts as well!) - I agree that it takes a little more setting up than Windows but that is down to different legal systems in various countries that prevent the distribution of DVD decoders and MP3 players. But Windows for the UK has these installed - Linux doesn't have UK specific distributions, so a single click on a button when attempting to play an MP3, for example, will take you exactly where you need to be to install the software to actually play them. Job done.

Those netbooks, so scorned by Roy, can be upgraded to install a 'real' Linux distribution on them should the user wish to do more than the customised version allows. You can even dual boot between the two - so Granny can use the default and "tinkering Ted" can get down and dirty in the command line!

"Oh dear! Along comes a new printer/graphics card/ or other shiny hardware device. Are you really going to wait 6 months for some dusty coder to get one for Christmas and decide to write a driver or interface for it?" Another great quote! Most, but I agree not all, new devices are

simply old devices with a face lift. Drivers already working will continue to work.
Many were the letters and articles in QL World, QL User, Quanta and so on when someone bought a new printer - how do I get it to work with my QL. I see no difference here!
When my 'state of the art' HP multi-function printer/fax/copier/scanner came out, there was drivers already for it in my distribution simply because what was yesterday's state of the art is today's also ran. In addition, HP supplied an application for Linux users so that they could also print/scan/copy/fax/etc from day one.
Now, I do agree that many new (and I mean new) devices do not have drivers. The problem there is with the non-disclosure agreements (NDA) that developers must sign before working on utilities etc to work them. With Windows and any other proprietary system, the source code is kept well hidden away - in some cases, seeing the source code is a breach of some law or other and you have to have your eyes poked out with a red hot poker.
With Open Source, where the source code is freely available, these NDAs are unworkable and so drivers cannot be written using the manufacturers data sheets. They must be engineered in isolation to avoid being in breach of any NDAs etc. This is not an ideal situation as it can take many months for a new device to appear usable on Linux.
Salvation is on the horizon, however, many of the Linux driver developers have formed an initiative to write, for free, Linux drivers for any manufacturer who contacts them. Many manufacturers do want their devices to run on Linux and many are coming forward to join the party. You can find out more at **http://www.linuxdriverproject.org**.

I'm especially fond of this quote from Roy though "... you probably only have Linux because someone talked you into it and set it up for you. Or because it was free.". Talk about pots and kettles. Why do you have Windows on your PC then? Did you have a choice or did someone install it for you and did it come with your PC for "free". Well? I happen to have Linux on my laptop (and desktop for my computer) because I chose to install it. I have paid the "Microsoft Tax" where every PC sold must carry a copy of Windows and because the vendors are not allowed, under the terms of their agreement with Microsoft, to sell a PC without a Windows OS installed. (Although this is changing as some vendors now offer Linux or Windows.)
You get a copy of Windows whether you want one or not. This helps boost the 'installed copies of Windows' figures that Microsoft release from time to time. You can get your money back of course, but you must not ever run the installed Windows system or it counts against you. Of course, it isn't easy to get your money back either - so most people, myself included, don't bother. Windows is ripped off and Linux is installed. Job done.
How many people out there still send emails in whatever default Microsoft decided would be 'correct' - HTML? How many know that the actual accepted standard for emails is plain text? Don't talk about stuff being installed for you or for 'free' when you are doing (probably) exactly the same thing.

Page 52 Security.

"Talk to me about virus protection then". OK, I will. Yes, there are fewer nasties out there for Linux than there are for Windows, but you miss the point. It has nothing to do with the relative numbers of machines with one or the other installed. It has much to do with security - Linus was written securely from the start, Windows had to have it added on - mostly by third parties of course - because it was shot full of holes from the very beginning.
In Linux, you have a root user and a 'you' user. I know from Roy's posts many months (or even years) ago on the QL-users list that he hates this idea as he cannot understand why he has to switch users to install a program, for example. Fair comment. It does seem to be a long winded way of doing things. But you pays your money and makes your choice.
If you want a system that can be trashed by opening an HTML formatted email, then get Windows. If you want security, Linux will serve your purpose admirably. And don't forget, Windows didn't have an 'administrator' user until fairly recently. Now even Windows has two different users - how does Roy get on with that I wonder? Plus, Windows XP (and I'm told Vista as well - but I do not have Vista so I cannot confirm) comes with the administrator user set to have no password. After 10 minutes on the internet, you are effectively hacked!
If I catch a virus from a web site on my Linux system, the worst it can do is trash my own user. My programs remain safe as does my system itself. Not so on Windows.

Roy's mention of "Three Dead Trolls In A Baggie" singing their 2001 song, "Every OS Sucks" was highly amusing. That made me laugh out loud! My Dyson sucks as well by the way, is that a good thing?

2001 was a hell of a long time ago even for Windows. Linux has moved forwards a lot since 2001 and keeps on moving.
I have no intention of ever trying to convert Roy to Linux for exactly the same reason as I won't convert my wife either. Her laptop runs Windows and always will I suspect. It's what she knows and uses all the time. She can't be bothered to learn new manners of doing things and programs with funny names etc (K3B - to burn a CD? What's that all about? Well, it turns out the 'K' is for 'KDE' and '3B' is short for BBB which is short for 'Burn Baby Burn'.
However, I'd be very interested in knowing how long Roy took to learn Windows after DOS and so on. It's not the switch that most people find painful, it's unlearning Windows and learning Linux.
For those with a yearning to try it, get a live CD and play with it. You don't install it on your system so it doesn't break anything. It runs a little slower than usual because all the software is compressed onto a CD so it has to be read and uncompressed before you can run it.
And one last thing about Linux, guess what the vast majority of the internet is running? All those open source programs like Apache web servers etc? You got it, Linux, even Microsoft use it internally for their own critical systems - they use Oracle databases on Linux servers. I wonder why? Could it be for reliability? Why not use SQL Server databases on Windows then?

Page 53 Back to the Black Box then.

"This week, for example, they were discussing the 36 character file name length". Indeed we were. It was actually me that started it. I asked if anyone had the slightest clue as to why, if I'm limited to 36 characters in a filename - and in a directory entry - do I need to keep the full path name in each and every directory entry when I *should* be able to keep only the part of the path that is relevant.
Lets say I have
"win1_SourceCode_C68_myProgram_c"
where
"win1_"
has a directory entry with
"SourceCode"
in it.
"SourceCode"
has a directory entry with
"SourceCode_C68"
in it.
"C68"
has a directory entry with
"SourceCode_C68_myProgram_c"
in it.

None of the above makes sense to me, why do I need to keep repeating the parent directory tree in my lower levels? No wonder 36 is not enough space for a proper filename!
If you look at the directory entry for a idealised situation, similar filename to the above, it would be totally different :
"win1_"
would have a directory entry with
"SourceCode"
in it.
"SourceCode"
would have an entry with
"C68"
in it.
"C68"
would have
"myProgram_c"
in it. That way, we could keep the 36 character limit, but for each part of the full path, and not for the full path itself.

I know that Roy wrote about the 36 limit many years ago and I think I actually joined in a discussion around the same time on QL-users. The fact that nothing has happened since then is down to two things - the source code wasn't yet available and too many old things would break if changes were made. That's not to say that there may be one of the 'geeks' Roy fondly refers to out there in userland who won't rise to the challenge and convert from the current system to my proposed version or a brand new system altogether?
That's what geeks are for!

Ah well, I have had my say on Roy's comments. I agree with some, I disagree with others and we partially agree on the rest. That's what free speech and discussion is all about.
I hope Roy is not going to vanish from the QL world and that he will continue, however infrequently, to contribute. I wish him well in all he does in future. Good luck Roy, you will be missed.
Cheers, Norman. ■

Back to 100% Reliability

by Jochen Merz and Geoff Wicks

We are very sorry to have to end this issue with the following article. However, we have thought about and discussed the situation for over a year now, and, now that QBranch has decided to stop every QL activity, feel we have to explain some why's to our readers.

Several readers will have noticed that the relationship between QL Today and the UK office, QBranch, has been under severe strain for some time. Within the last 18 months we have twice had to delay printing of the UK issues of the magazine because of lengthy delayed payment for these issues by QBranch. As these problems are continuing we reluctantly feel we have to give our readers more information about the problems than we have done previously. This is painful as we recognise that Roy Wood has made a significant contribution to the QL community, including QL Today, and is respected by many of our readers.

It is sad that I have to write this especially after attending some many shows and undertaking so many journeys to other countries with many great and enjoyable times. In Germany there is a saying that friendship and money do not work together. I do not know if it was because of friendship or the fact of preventing damage to the QL scene but it was probably both. I did not do anything about a situation that has been going on for many, many years.

You may remember that when our editor ran Just Words! he declared at one point that any of his programs not purchased directly from him would be seen as pirate software. This was because he was getting frequent requests for after sales help from QBranch clients he had not heard of and for whom he had received no payment. In his opinion there was not a deliberate attempt to avoid payment, but that the financial management of QBranch was below par.

Similar problems have been reported more recently by Jim Hunkins. For some time he has received neither customer details nor royalties for QDT licences sold by QBranch. At one stage Jim considered giving up his QL work because of this. Jim is still anxious to finish the QDT file manager and hopes to do so in the second half of this year.

QL Today has always been a profitable part of QBranch's activities, but we have faced the same problems of unpaid invoices.

This goes back over many years - it actually started before the EURO came into existence - and concerned several thousand EUROs. I kept very quiet about it and got a payment every now and then after sending email after email and after receiving numerous excuses about banking problems and similar. When I issue an invoice I am legally required to pay the VAT within one month. I also have to pay the printer for QL Today and my software authors like Marcel whether or not I receive payment from the money Roy was paid by clients and subscribers.

In this time I have not charged Roy a single penny in interest, which further reduced my small earnings from the QL.

Over the years we have made agreements about regular payments to reduce the accumulated debt, but there were never regular repayments.....some money would come, then nothing for 2 or more months, then some more money and then nothing again. I was sick and tired of writing email after email begging for my money.

Towards the end of 2007 I felt I could not continue like this as it was seriously affecting my health. Promises of payment that had still not arrived after 10 days gave me stomach and headache problems. As emails were not helping I sent a registered letter to Roy, and for the umpteenth time outlined the situation.

In this letter I stated quite clearly that I could not extend further credit to Roy and that future editions of QL Today would only be delivered prepaid. You should remember that Roy has already taken subscription money from the readers and thus there is no reason why he should not be able to pay promptly and in advance for each issue. In spite of this letter a late payment meant that there was the first delay in QL Today's history in getting the magazine to its readers, but only for QBranch subscribers. As soon as I received payment the QBranch copies of the magazine were printed and shipped.

From then on until mid 2008 the promised repayments to pay the outstanding invoices became more regular. However from mid 2008 the situation reverted to many promises but no money. The result was another QL Today delay to QBranch subscribers.

Payment improved once again until November 2008, with a backlog of 2 months. Payments were missed for October and November and money promised for December. I once again unwisely trusted Roy to keep to the agreements because I did not want the Xmas issue to be late.

Although Roy has reduced his debt there is still an outstanding balance that goes well into four figures - whether in pounds or in Euros. Although I received money for the printing and shipping of issues 2 in December and the current issue 3, the agreed regular payments to clear the debt have not been made for over 5 months. For the last two months I have had no replies to emails.
On the principle of the oldest invoice is the first to be cleared several complete issues of QL Today remain unpaid.
We are very sorry for the inconvenience caused to our QBranch readers, but we are powerless to do anything about the situation. Their contract is with QBranch and not QL Today, and we do not even know the names and addresses of these readers. Indeed we would now like these readers to register their names and addresses with us.

Fortunately I can end with some good news. Our deputy editor, Bruce Nicholls, who is well known throughout the QL community for his reliability, has agreed to collect QL Today subscriptions through his company, Quo Vadis Design. Should you subscribe to volume 14 through Bruce he has agreed to forward any payments and details directly to me. You will find all the relevant information on his website:
www.ql-qvd.com
Finally we hope Roy will now sort out his affairs and fulfil his commitments to QL Today. Once again we would stress that Roy has a distinguished record within the QL community.

Both the editor and I are keen to produce volume 14 and hope you will continue to support us.

Editor: Although the above was written by Jochen, I was extensively involved in the final drafting and fully agree with the content.
Last minute update: After some help from Tony Firshman (I was told my reminding emails to QBranch all got lost, that Roy does not think about QL anymore, did not know when issue 3 was going to be printed and the money therefore not paid) the money arrived just before I was going to master-print this issue. This money was merely for paying the current QL Today invoice, plus about 50 pounds instead of something like 750 EUR, had there been regular payment of the outstanding invoices. Roy emails that rest of the money would come on an 'if I have it basis'. If he does not think about QL matters anymore, as he told me, I hope he will not break his promise not to sidestep the remaining debt.
If I were to follow strictly what I should be doing, i.e. assign incoming money to the old invoices, then I would not be able to deliver this issue to QBranch. In the interest of the future of QL Today, I worry about the situation, but shall deliver anyway.

However, and I want to make this quite clear, I need the money for issue 4 from QBranch in time, and also a substantial payment of the outstanding arrears of at least 500 EUR. These arrears are invoices for QL Today volume 12 issues, for which readers have already paid QBranch and for which Roy made a profit (as with all previous issues).
Without this payment, I shall not be able to deliver issue 4 to QBranch. If you are a subscriber through QBranch and are concerned about this, you should get in touch with QBranch.
Bruce Nicholls of Quo Vadis Design has offered to take over the delivery of this issue and issue 4, providing Roy has paid him the postage and me the amount for issue 4, and this offer was accepted just today, the day I was doing the master-print.
We have tried more than hard to find solutions over many years, but the payment situation has just given me a lot of headache and stomach pain as well as the emotional distress from not being able to do something without damaging the magazine.
All I can promise is that we shall be back to 100% reliability with Volume 14!
■

The Next Issue - Last Second News

QL Today is hoping to have a very interesting story about the development and release of the QL ... from a source which was directly related to the development of the QL at Sinclair Research. However, we still need some investigation and confirmation. Therefore, we would like to ask you if you have paper cuttings from all the press releases shortly before and after the QL was launched. If so, please scan and (e)mail it to us! Do YOU know anything about it? We are especially interested in dates - when do you think JM and JS ROMs were shipped?

The QL Show Agenda

At present, we are only aware of one planned event in 2009:

"QL is 25"

QUANTA is holding a two day workshop on Saturday April 18th and Sunday April 19th at the Allesley Hotel, Coventry, CV5 9GP to celebrate QL is 25

The workshop will be in the Imperial Suite and all talks will be in the Harmon suite, next door.

It is hoped that talks on Saturday will be given by:-
George Gwilt : on his programs
Simon Goodwin : on the Lear PCB Cad design program
Steve Poole : yet to be decided

The Repair Desk will be run as usual by Nemqlug sub group. Please bring any items you have for repair and the team will be happy to look at them. Rich Mellor will be there with RWAP Services.

The Celebratory dinner is on Saturday at 7.30pm. Cost £20.00 per person to include first drink and coffee.

On Sunday morning there will be a session of Questions & Answers please let the Secretary have your questions by Thursday 16th April if you are not able to attend the workshop or by Saturday 10.00 am at the workshop. This will give the panel time to formulate the best answers. All questions and answers will be printed in the April/May magazine

25th Annual General Meeting will start Sunday at 2.00pm in the Harmon Suite.

An advantageous accommodation rate has been negotiated as follows:
- Single room bed & breakfast £47.00 - Twin/Double Room bed & breakfast £53.00
Please book through QUANTA Secretary for accommodation and dinner and NOT with the hotel direct. This is at the hotel's request.

A lunch menu will be available in the Imperial Suite with order forms. Anyone wishing to order a lunch should give their order to the QUANTA Secretary before 11.30 am and it will be delivered between 12.30 and 1.30 with a bill.

For more details: http://www.quanta.org.uk/news/index.asp#25thworkshop

The Next Issue

We plan to have the next issue ready for you towards the middle or end of June - maybe even a bit earlier - we will see. As always, it depends on how quickly we get reviews, articles etc.

We also need your support for the next volume - therefore, please renew as soon as possible to reduce the need of sending out reminders. We try to save on the costs to keep the high quality of QL Today. This time, there is also a bonus for early renewals. As you will find the contents of the last page this time here, one page earlier, you can guess what comes on the last page. We thought it is easier for you to scan or copy.

Time to Renew

☐ I hereby subscribe to **QL *Today*** **for 4 issues of Volume 14. The total price for all four issues** is as follows, including postage and packing (depending on destination and time of renewal ... early renewals get a discount!)

Destination	price until 30.4.2009	price from 1.5.2009 on
Germany, Netherlands & United Kingdom	**EUR 27.90**	**EUR 29.90**
Rest of Europe	**EUR 29.90**	**EUR 31.90**
Rest of World (airmail)	**EUR 39.40**	**EUR 42.90**

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- ☐ Switzerland: Jochen Merz, Account 60-690080-4, PostFinance, Clearing-Nr. 09000
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- ☐ and from all other countries in EUR with IBAN and BIC to account
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- ☐ UK customers can pay £25.50 (price based on exchange rate at print time, valid until April 2009) to
  Jochen Merz, Account 83795395, Citibank UK, Sort code 30-00-45
  or send cheques in £ - no fee for UK sterling cheques (payable to *Jochen Merz* only)!

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A little survey - you probably noticed that the front parts of the magazine are layed out differently than before.
Please rate the LAYOUT of the various articles by giving 1 (not good) to 10 points (very good) or a comment:

News (page 4-10) _____

The birthday of the QL (page 12-13) _____

QL Today Critics & Suggestions (page 14) _____

A tale about characters (page 15) _____

Continental Nostalgia (page 16-17) _____

As we are trying to produce a magazine which YOU like, we need your feedback. If you have any other comments:

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